Three Lectures
ON
TRAUMATIC INFECTION,

Delivered at the Royal College of Surgeons of England on Feb. 25th and 27th, and March 1st, 1895,

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LECTURE I.

Delivered Feb. 25th.

SOME LOCAL INFECTIONS.

Methods of Investigation.—Cadaveric Bacteria a Source of Error.—Classification of Material.—Mycotic Peritonitis.—Diffuse Septic Peritonitis.—Lymphatic Glands in Diffuse Septic Peritonitis.—Operative Peritonitis.—Perforative Peritonitis.—Streptococcus Peritonitis.—Streptococcus Pleuritis.—Bacterial Invasion of the Peritoneal Lymph Paths in Septic Peritonitis.—Intestinal Bacteria in other conditions; in Hepatic Abscess; in Typhoid Abscess.

GENTLEMEN,—For some years, with the help of friends and pupils, to whom I am deeply indebted, I have worked at various kinds of traumatic infection. The results are given in these lectures. It will be obvious, and I am fully conscious, that in many instances the inquiries are incomplete; nevertheless, I venture to hope that light is thrown upon some conditions, and that what has been done may be helpful to my fellow workers. Throughout these lectures the gaps which ought to have been filled are pointed out, and no attempt has been made to give an appearance of completeness.

METHODS OF INVESTIGATION.

My plan has been to choose cases of traumatic infection of which the clinical history and morbid anatomy were known and work out their morbid histology. Nearly all the cases were under my observation when surgical registrar in St. Bartholomew's Hospital, and of many of them I conducted the post-mortem examination. This order has not always been strictly adhered to, but, as an extra control, the clinical history and morbid anatomy were often purposely left unascertained until the morbid histology and bacteriology had been investigated. Although it may be rather tedious and prolix, I propose to illustrate each branch of my subject with these cases, giving the clinical history, morbid anatomy, morbid histology, and as far as possible the bacteriology of each. I venture to surmise that it must be advantageous to an audience of surgeons to be able to consider all of these together and in continuity. A short commentary follows each case, and in this some of the more recent researches bearing upon it are mentioned. I need not speak about the clinical and anatomical methods. For histological purposes the tissues were obtained as fresh as possible and hardened in alcohol. The sections were stained in various ways. Sometimes good results were obtained by Gram's method, but nearly all the best were got by using, upon Dr. Klein's advice, a staining solution which was used by Canon to demonstate the influenza bacillus in blood, and which is called Czenzynke's solution.[1] This is a mixture made by adding together a concentrated watery solution of methyl blue 40 per cent.,[2] eosin solution (in 70 per cent. of alcohol), 20 per cent., and distilled water 40 per cent. The sections of the hardened tissues were soaked in the above solution for not less than seventy-two hours, and often for seven or eight days. The sections were mounted in the usual way. As the bacteria are stained blue and the tissues pink, their presence is easily ascertained; but we have found the pink ground most unsuitable for micro-photography. However, Czenzynke's solution has stained bacteria when nearly all of the ordinary methods have failed. Nevertheless, it has one great demerit. Many of the specimens fade and lose their brilliance after a few months, so that it is necessary to draw them at once. Micro-photography would be especially useful under these circumstances, but, unfortunately, it cannot be used for the reasons given. I have, therefore, been obliged to make drawings of the most instructive of the sections. These, together with the specimens themselves, are displayed for your inspection. The drawings have been made into lantern-slides by my friend, Mr. Cosens, to whom I am deeply indebted for invaluable assistance. My experience of Czenzynke's method shows that it should be used with caution. The protoplasm of the connective tissue cells often holds particles of the aniline blue, so as to simulate bacteria. However, the irregular shape and size of the particles, the absence of that peculiar translucent hue which dyed bacteria possess, and the presence of a nucleus, is enough to prevent an error. No material was discarded until all kinds of methods had been tried upon it. Many months were often devoted to these endeavours. The ultimate result was often highly satisfactory.

CADAVERIC BACTERIA A SOURCE OF ERROR.

In work like this there is great danger of mistaking bacteria which have grown in the tissues after death for those which may have existed during life. In hot weather these cadaveric bacteria grow very quickly, and material can seldom be obtained for histological examination until some hours after death. However, I trust it will be acknowledged that this source of error has been guarded against throughout these lectures. In doubtful cases the question is discussed in the commentary, and some material has been put aside because the tissue changes and bacteria were probably of post-mortem origin. An important *rôle* has not been ascribed to bacteria unless they were present in numbers and amidst tissue changes such as could only have occurred during life, and such as might reasonably be ascribed to their presence. The bacteria of putrefaction are distinguished by morphological peculiarities, by the situations in which they grow, and by the absence of pathological changes in their vicinity. But much work remains to be done at the cadaveric bacteria, and even with the greatest caution they remain an abiding source of error.

CLASSIFICATION OF MATERIAL.

The various cases which have been investigated fall naturally into the following groups. First, those in which the infection was local; second, those in which the infection had entered the blood, but had not passed any further; third, those in which the infection of the blood had passed into the tissues, producing changes there; and, lastly, some mixed infections. This classification of the cases is suggested more by convenience than scientific accuracy. Reasons will be given to show that even in the typical local infections there may have been some passage of bacteria through the blood to the kidneys, and perhaps to other organs.

MYCOTIC PERITONITIS.

I propose to begin the local infective diseases with acute inflammations of some of the serous sacs, commencing with septic peritonitis. And, first, a case will be given to show how easily peritonitis may be overlooked, and how bacterial invasion of the peritoneum may be unsuspected. In the following case I believe that an infection of the peritoneum had occurred, although during life no signs of it were recognised, and after death none were apparent to the naked eye.

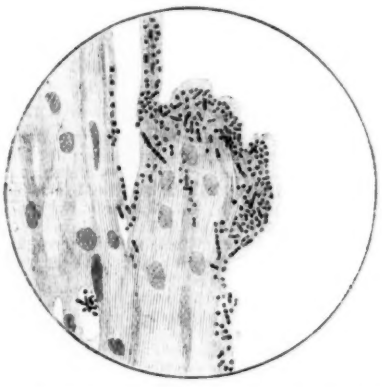
CASE 1.—The case was that of a woman aged sixty-nine years, who had had a multilocular ovarian cyst removed. The peritoneum was drained for forty-eight hours after the operation because blood oozed from some slight adhesions. She did well until the fifth day, but then her temperature, which had hitherto been normal, rose to 101° F., and remained about that height until the tenth day, when she died. During life the abdomen seemed free from inflammation, and the fatal issue was attributed to bronchitis. At the examination, which I made twenty hours and a half after death, the wound was almost healed, and I expressly noted that no inflammation, fluid, or lymph could be seen in the peritoneal cavity, but merely slight localised hyperæmias. Around the pedicle of the right ovary, which was secured with silk, I especially noted that there was hardly any inflammation or lymph. All the abdominal viscera were healthy except the kidneys, which were chronically inflamed. The left pleural sac contained three quarters of a pint of purulent fluid, and the parietal and visceral pleuræ were covered with flakes of lymph. The lower lobe of the left lung was pneumonic and sank in water. The stump of the ovarian pedicle was examined histologically. There was

[1] Centralblatt für Bakteriologie und Parasitenkunde, Band xi., 1892, p. 149.

[2] I am accustomed to add 5 per cent. of carbolic acid to the watery solution. It keeps longer and acts quite as well, if not better.

slight hyperæmia and here and there on the surface small masses of lymph, composed of exudative cells and bacteria. Amongst the latter were long bacilli with rounded ends and usually in pairs, and almost as big as anthrax bacilli; also short ovoid and very thick bacilli, together with vast quantities of smaller bacteria which grew singly, in pairs, and short strings. There may have been micrococci, but so many were slightly elongated that it is possible that all of them were minute oval bacilli. (Fig. 1.) Many of the smallest bacteria had entered the lymph paths and had filled both those near

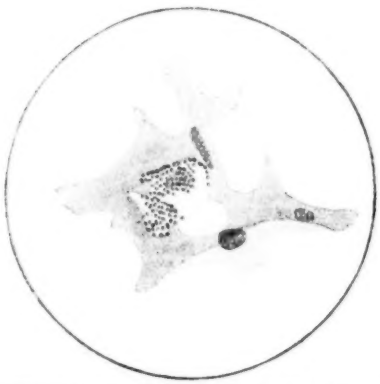
FIG. 1.



Mycotic peritonitis. Lymph upon ovarian pedicle. The bacteria are upon the surface and in the lymph paths.

the surface and many of those in the depths of the peritoneum. (Fig. 2.) Here they surrounded a nuclear cell, which suggested that they had either been carried into the lymph paths by a wandering leucocyte or had surrounded one after their entrance. If these bacteria-laden cells were phagocytes they must have been singularly inefficient. Some would say that the bacteria which were found in this case were mere saprophytes which had travelled from the intestines after death. But if this were so it seems strange that they should only be found in the lymph and in the

FIG. 2.



Mycotic peritonitis. Bacteria in lymph spaces in tissues of ovarian pedicle.

lymph paths leading from it. The uninflamed parts of the peritoneum had no bacteria either upon its surface or in its depths. The silk upon the pedicle contained no bacteria, and none could be seen in the lymph in its immediate vicinity. I should suppose that the chemicals in which the silk had been soaked may have preserved it from infection. If this be so it would help to explain those cases in which silk is not extruded from wounds which are obviously septic. Until the histological examination I had no suspicion that such numbers of bacteria would be found in the peritoneum. The question arises as to the share they had in the fatal ending. They hardly seem to have compassed this by acting locally upon the peritoneum. During life the clinical signs of peritonitis were wanting. However, I have no doubt but that they were the cause of the pleuro-pneumonia, which will presently be described.

Pawlowsky[3] has made an important observation which bears upon such cases as this. He describes a variety of acute peritonitis which he calls mycotic peritonitis, in which there are no macroscopic appearances, but in which microbes can easily be obtained by pressing cover glasses upon the peritoneum and afterwards drying and staining them in the usual way. But this form of peritonitis is very acute, and death occurs very early and before fibrinous effusion or pus have had time to occur; life is not prolonged as in the instance which has just been given.

The histological examination of the lungs showed catarrhal pneumonia and pleuritis, with more corpuscles than fibrin in the exudation. The methods of Gram and Loeffler give negative results. But after we had all failed Mr. Soffi obtained for me beautiful specimens showing that the pleuritic lymph was crowded with bacilli. Many of these were the shape and size of tubercle bacilli; some were slightly curved and some might have contained spores. They were distributed indiscriminately in the lymph, but some grew in short leptothrix. The lymph also contained vast numbers of small, short, ovoid bacilli. Both of these varieties may have belonged to the same species, and were the same as some of those seen in the peritoneal lymph. I was uncertain of the presence of these bacilli in the pneumonic lung. It probably contained pneumococci. Pleuritic exudation is not very hard to examine. In three other cases I have found in it streptococci (Fig. 8), pneumococci, and septicæmic bacilli respectively. With pneumonic lung I have been most unsuccessful, and when pneumococci have been seen they have been in such small numbers as to excite doubts as to their being the cause of the pneumonia. Acute inflammations of the lungs are associated with various bacteria. In the 128 cases examined by Weichselbaum[4] the diplococcus pneumoniæ was found in 94; a streptococcus in 21; staphylococcus pyogenes aureus and albus in 5 cases of pneumonia secondary to typhoid fever and osteomyelitis; and a bacillus pneumoniæ, similar to Friedlander's pneumococcus, in 15 cases. In 11 cases of pleuritis a chain coccus was found. In conclusion, this case suggests that surgeons ought to be very cautious in assuming the absence of peritoneal infection. Also, that much might be learnt by a more rigorous and scientific examination of fatal cases. Towards the end of these lectures I will instance other cases to show the fallacy of a mere naked eye examination of the tissues.

DIFFUSE SEPTIC PERITONITIS.

During the past year I have been so fortunate as to cure by operation three cases of diffuse septic peritonitis. When we consider the clinical history and morbid anatomy of these cases such a result could hardly be hoped for. I have therefore tried to ascertain what light morbid anatomy and bacteriology threw upon the possibilities of recovery. The material which was used had all been collected long before the successful results occurred.

CASE 2 (Fig. 3).—To illustrate the rapidly fatal form of acute septic peritonitis I will give the case of a boy aged eight years, who was operated upon for the cure of a right inguinal hernia which he had had since his birth. At the time of operation there was an old septic sinus leading into the inguinal canal. This sinus was the result of a previous attempt to perform the radical cure. It led towards a ligature which, as afterwards appeared, had been placed upon the stump of a Meckel's diverticulum. It is unnecessary to give the details of the operation, but it will suffice to say that the boy died forty-eight hours after, with the usual signs of diffuse septic peritonitis. The highest temperature recorded was 102° F. At the examination the abdomen was distended, the viscera inflamed and coated with viscid lymph, and the pelvis and flanks nearly filled with purulent fluid. The chief focus of inflammation was around the right internal abdominal ring. No fæcal matter could be found in the abdominal cavity. Twenty inches from the cæcum a Meckel's diverticulum grew from the ileum. It had been divided and encircled by silk

[3] Centralblatt für Chirurgie, 1887, pp. 886 and 887.

[4] Ueber die Aetiologie der acuten Lungen- und Rippenfellentzundungen. Wiener Medicinisches Jahrbuch, 1886, p. 483 et seq.

ligatures, which still fastened it to the abdominal wall. The sinus, which has been mentioned, ran towards these ligatures and opened into the abdominal cavity. It was evidently the centre of the septic peritonitis. The other end of the diverticulum was attached to the top of the right testicle. The microscope showed that all the peritoneal vessels were distended with blood, in which no bacteria could be found. In some places the blood cells were extravasated amongst the tissues, but otherwise the substance of the peritoneum had undergone hardly any alteration. Its surface, however, was covered with a thin layer of lymph, which was here and there crowded with swarms of small, short bacilli, growing in pairs and short chains. (Fig. 3.) The bacilli were confined to the surface lymph except in one

FIG. 3.

Diffuse septic peritonitis. Bacteria in the lymph upon the surface of the peritoneum and just within its substance.

place, where a single group lay about a hundredth part of an inch within the substance of the peritoneum. (Fig. 3.) Elsewhere the lymph paths contained neither pus cells nor bacteria. The inflammatory lymph consisted of cells with some fibrin. It is not certain, but probable, that these bacteria were intestinal in origin, and very likely the bacillus coli communis. The slightness of their penetration into the peritoneum may be explained by the very feeble mobility which the bacillus coli communis possesses, or by assuming that the swarms in which it grows are ill adapted to penetrate the tissues or to pass along the lymph paths. Therefore, in some kinds of diffuse septic peritonitis the peritoneum itself is not penetrated by the bacteria for many hours and its tissues are almost uninjured. Apparently, so far as the serous membrane itself is concerned, there is nothing to forbid recovery. Indeed, there is a close similarity betwixt the case which has just been described and one of my cases of diffuse septic peritonitis which did recover after laparotomy.[5] In my case the peritonitis was of not less than forty-eight hours' duration, and was caused by a perforation of the ileum, which I found and sutured. At the operation the intestines were emptied of their fæcal and gaseous contents and the peritoneal sac thoroughly washed out and drained. Whilst operating I observed that the mesenteric lymphatic glands were swollen to at least thrice their natural size. I did not then know what evil effects these inflamed glands might exercise. Fortunately, they seemed to depart without disturbance.

THE LYMPHATIC GLANDS IN DIFFUSE SEPTIC PERITONITIS.

Being inquisitive to know the characters of the lymphatic glands in diffuse septic peritonitis, I examined them in another case due to ulceration of the vermiform appendix.

CASE 3.—The patient was a boy aged seven years, whose illness began suddenly with a violent pain in the right side of the abdomen. This was soon followed by distension, inflammatory obstruction, and fæcal vomiting. The abdomen was opened on the third day, and an inflamed and perforated vermiform appendix was removed. The peritoneal cavity was washed out and drained, but he died in four hours. I obtained portions of the peritoneum and some of the swollen lymphatic glands within eighteen hours of his death. The appearances of the peritoneum were almost the same as in the previous case (Case 2, Fig. 3). The lymph upon the surface of the portions examined was scanty. It was composed of proliferated peritoneal cells, with hardly any fibrin. Amidst the cells were bacilli of various morphological varieties, but mainly short bacilli, singly and in pairs. In some places bacteria with morphological characters of cocci and diplococci were seen, and these coccus forms had begun to penetrate the substance of the peritoneum, although the bacilli were confined to the surface. The peritoneum itself seemed to have undergone hardly any alteration, except that its endothelium was proliferating. I have lately observed another case of septic peritonitis in which the surface lymph contained bacilli and micrococci, and the depths of the peritoneum micrococci alone. In this last instance the micrococci were in chains, and easy, therefore, to identify. The swollen lymphatic glands were more vascular than healthy ones, and the vessels in their hila and along their trabeculæ were distended with blood. The lymph paths were very wide and had probably been distended with fluids; some of them, especially those of the cortex, were crowded with leucocytes which retained methyl blue. However, no bacteria could be found in any part of these lymphatic glands, and I think it doubtful whether any were present. I am indebted to Mr. Blandford for much patient labour at this material. Thus in rapidly fatal diffuse septic peritonitis neither the peritoneum nor the swollen lymphatic glands are for many hours in an irremediable state.

OPERATIVE PERITONITIS; PERFORATIVE PERITONITIS.

If my observation is correct—and I know how easy it is to be mistaken—that the peritoneum was infected with both bacilli and micrococci, a point of some interest arises. Waterhouse,[6] Walthard,[7] and others speak of "perforative peritonitis" and "operative peritonitis." In the first bacilli are found, in the second micrococci. This generalisation would have been more probable if Beinstock had been right in his assertion that the intestines were only inhabited by bacilli. Escherich has shown, however, by plate cultures that cocci also inhabit the intestines. Culture experiments might easily lead to the inference that the fluid of perforative peritonitis contained nothing but bacilli. On various occasions I have inoculated culture media from the peritoneal fluid in perforative peritonitis. Like others, I have obtained a growth of bacillus coli communis, not because it was the only microbe present, but because the media suited it best. In cover-glass preparations of the exudations in perforative peritonitis many more morphological varieties of bacteria can be seen than can be grown either in the presence or absence of oxygen; indeed, culture experiments taken alone abound in fallacies. In a case of diffuse septic peritonitis due to a perforating ulcer of the duodenum I could see in the exudation: (*a*) minute bacilli, singly and in pairs; (*b*) bacilli about the size and shape of tubercle bacilli; (*c*) short, plump bacilli of some magnitude; (*d*) cocci and streptococci; (*e*) saccharomyces; and (*f*) moulds. Inoculated into broth, this exudation grew short bacilli, in pairs and short chains. Some of the chains might have consisted of streptococci, some of which were seen in the exudation. In the case (Case 2) to which I have just referred we have to consider the possibility of the original infection having been one of micrococci. In this event the bacilli may have emigrated into the lymph which the cocci had produced from the intestines and after the death of the patient. Before saying anything more about perforative peritonitis I propose to contrast a case of streptococcus peritonitis with those which have just been described.

STREPTOCOCCUS PERITONITIS.

CASE 4.—A girl sixteen years of age was admitted with inflammatory swellings about the right humerus, the lower end of the left radius and ulna, and of the left calf. She also had a distended and tender abdomen, but without sickness or obstruction. She had not been well for three weeks and attributed her illness to a wound of the thumb which she received whilst at work making lace. The scar of a recently healed wound was seen upon the thumb. The swelling about the right humerus was opened, and some greenish pus escaped.

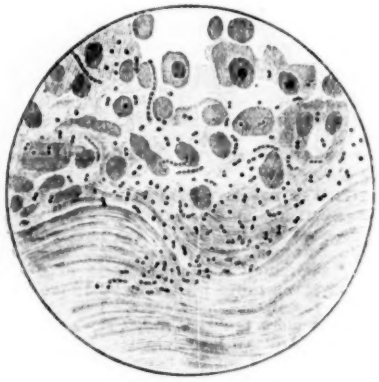
[5] Transactions of the Royal Medical and Chirurgical Society, vol. xxviii., 1895, p. 1 et seq.

[6] Prize Essay, Edinburgh. For abstract see Virchow's Archiv, Band cxix., Heft 2.

[7] Archiv für Experimentelle Pathologie und Pharmakologie, 1892, p. 275.

Soon after the operation she began to vomit and speedily died. During her illness her temperature was usually about 101° F. At the examination, which was made in the winter twenty-six hours and a half after death, the swellings of the arms and legs were noted, and an abscess the size of a hazel nut was found near the root of the tongue, amongst its muscular fibres. The thoracic viscera were normal, except the bases of the lungs, which were congested. The peritoneum was much inflamed and contained a quantity of pus, some of which filled the pelvis. The vagina, uterus, and Fallopian tubes were healthy; but the left ovary contained an abscess as large as an orange, which had burst and, Mr. Berry believes, started the diffuse septic peritonitis. The spleen was large and soft, and the liver covered with punctiform hæmorrhages. The histological examination showed that the surface of the peritoneum was covered with lymph consisting mainly of corpuscles with very little fibrin. (Fig. 4.) This lymph

FIG. 4.



Streptococcus peritonitis. Lymph upon the surface of the peritoneum.

contained vast numbers of cocci, singly, in pairs, and in chains of various lengths. In places these cocci had penetrated far into the substance of the peritoneum and had reached the subperitoneal fat. Here they were thickly crowded in the connective tissue trabeculæ between the fat cells. (Fig. 5.) Many of the lymph paths were crowded

FIG. 5.

Streptococcus peritonitis. Streptococci in the depths of the peritoneum.

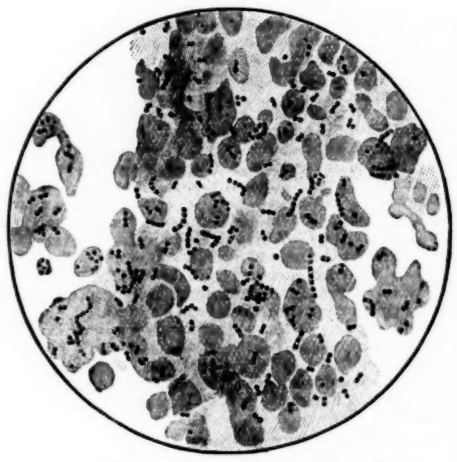
with vast numbers of cocci, diplococci, and streptococci. The bloodvessels of the peritoneum were engorged with blood, but contained no bacteria. The substance of the peritoneum was comparatively free from cellular infiltration. Here and there the surface lymph had in it leptothrix of slender bacilli. These were few and scattered, and, I believe, had grown after death. It is to be regretted that the liver, spleen, and other organs were not obtained for examination. Before the history of this case was known to me, and judging solely from the microscopical appearances, I had come to the conclusion that the peritoneum had been infected with streptococcus pyogenes. This is usually found in abscesses and suppurations about the female genital organs, and is also one of the commonest causes of pyæmia. Döderlein and others have shown that vaginal pus usually contains streptococcus pyogenes, often associated with other microbes. Thus the case may have been one in which an abscess of the ovary had existed for some time, and then suddenly burst and caused diffuse septic peritonitis, followed by pyæmia; or the original point of inoculation may have been the thumb; and the abscess in the ovary, like those of the root of the tongue and of the arm, may have been an ordinary pyæmic abscess. Whichever way the ovarian abscess formed, it seems to have been the source from which the peritoneum became infected. The histological appearances support the view that at first the micrococci grew upon the surface of the peritoneum, afterwards penetrated into its substance and into its lymph paths, and finally caused a general infection. It is unnecessary to point out that in such a condition as this our present surgical remedies would be of no avail. The histological examination of this case is, unfortunately, very incomplete. I was only furnished with some portions of the peritoneum. Further knowledge of these peritoneal infections is urgently needed, but it is doubtful whether culture media will supply what is wanted.

STREPTOCOCCUS PLEURITIS; STREPTOCOCCI AND BACILLI IN WOUND.

I have now described several cases illustrating the effects of bacteria upon the peritoneum. I next purpose to describe a case to show their effects upon the pleura, and incidentally their distribution in a large septic wound of the axilla.

CASE 5 (Figs. 6, 7, and 8).—A man aged thirty-nine years, who was strong and well nourished, and with nothing in his appearance to suggest a predisposition to infection, had a large lympho-sarcoma, which filled the right axilla. A severe operation was performed for its removal. At this operation a good deal of blood was lost, but not a very

FIG. 6.

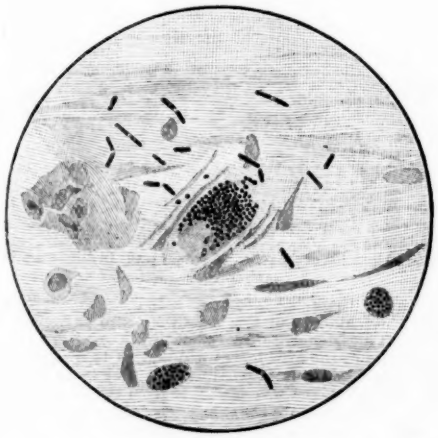


Streptococci in lymph of a septic wound in the axilla.

excessive or very dangerous quantity. Whilst attempting to dissect the growth from the chest wall the surgeon made a small puncture into the pleural cavity, and air was heard to enter and leave the chest. After the operation symptoms of infection soon became manifest. Upon the second day the temperature steadily rose to 102·2° F., with a rapid pulse and respiration, and he seemed much exhausted, but without suffering any pain. A quantity of blood-stained serum ran through the dressing of cyanide of mercury gauze. There was also emphysema of the cellular tissue of the neck and chest. He became gradually

worse and died upon the third day, all the symptoms having gradually become aggravated. The temperature rose during reaction to 104° and fell a little before the end, but rose again during the last hours. The examination showed that the tumour had been partially removed, and that there was a small puncture of the pleura in the third intercostal space. The axillary wound contained a few drachms of thin pus and was covered with a layer of ashen lymph. The whole pleura was covered with a layer of lymph and contained two or three ounces of blood-stained fluid, as did likewise the pericardium. In other respects the body seemed healthy, and no other signs of sepsis were found. The surface of the wound was covered with granular exudative cells, which had also infiltrated the underlying tissues. The exudation was full of cocci, diplococci, and streptococci. (Fig. 6.) Many cocci had passed along the lymph paths and vessels, which had been divided in the incision. Clots in the smaller vessels contained occasional cocci and diplococci, but in the deeper tissues many small vessels were packed with cocci. Amongst these many diplococci and occasional short strings could be made out. (Fig. 7.) The streptococci in the

FIG. 7.

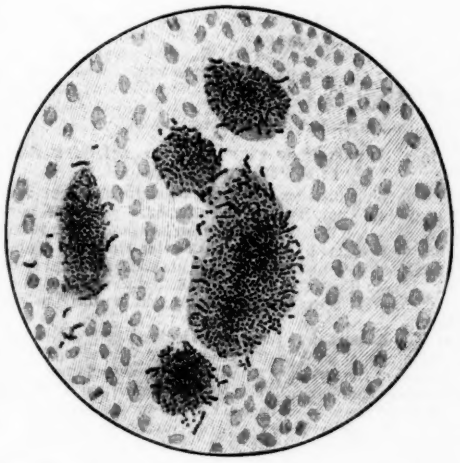


Septic wound of the axilla. Cocci in a vessel (? lymphatic). Bacilli in the depths of the tissues.

axillary lymph were scattered indiscriminately, and not collected in dense masses such as were found in the pleuritic exudation which I am about to describe. For long I thought that cocci were the only bacteria in this wound; but after many attempts bacilli were found in the lymph and in the tissues next to the wound. These were about the size of anthrax bacilli (Fig. 7), but with rounded ends. They possessed no spores and grew singly and in pairs. They stained by Gram's method, but were seen best by Cenzynke's. The discovery of these bacilli raises several interesting questions. Some might consider that they may have been mere putrefactive bacteria which had grown after death. This may be the truth, but is a pure assumption. Indeed, they are not at all unlike bacillus septicus in their morphological characters, and they also seemed to resemble that anaerobic microbe in another particular. The lymph upon the surface of the wound, where presumably oxygen might be present, was almost free from them, although it contained quantities of streptococci (Fig. 6); the tissues, on the other hand, contained many bacilli, so that it looked as if the latter sought a habitat where there was little oxygen. To me the discovery of these bacilli is very interesting. After many examinations I had concluded that the wound was infected with nothing but streptococci. Probably culture experiments would have hardened me in this belief. It is improbable that a strict anaerobe, such as this bacillus seemed to have been, would have grown by the ordinary methods which I and most others have hitherto adopted. It is evidently rash to make positive statements about the bacteria of any wound upon the mere evidence of cultures.

The lymph upon the surface of the pleura was from one to two millimetres thick. It was composed of exudative cells and fibrin, mixed with vast quantities of streptococci. The latter, unlike those in the axilla, grew in luxuriant chains entwined in dense and entangled masses buried in the lymph. (Fig. 8.) Many chains of cocci projected from the surface of the lymph into the pleural sac. The pleura had undergone the usual inflammatory changes, but these were confined to its surface and the lung was almost unaffected. The kidneys, liver, and spleen were examined for bacterial invasion but none was found. The fatal result was, therefore, caused by a local invasion of the axilla and pleura, and clearly the latter was enough to suffice. It is obvious that this infection might have been conveyed to the wound either during the operation or when the dressings became saturated. However, the temperature had begun to rise before the last event. It seems probable that both the wound and the pleura were infected at the same time, either by the instruments or by the atmosphere. The rapidity of the invasion, the high temperature, and the profound constitutional disturbance are all, I believe, ordinary features of virulent streptococcus invasion. The pro-

FIG. 8.



Streptococcus pleuritis. Entangled masses of streptococci in lymph upon the surface of the pleura.

duction of lymph in the wound and upon the serous membrane is also a common consequence of their activity. In the next lecture I shall describe a similar layer of pleuritic lymph which owed its origin, not to micrococci, but to bacilli. Had bacilli been found in the pleuritic lymph in this case the question would have been much more complicated. It seems reasonable to suppose that the comparative fewness of the streptococci in the axillary lymph and their luxuriance in that of the pleura is explained by the different conditions under which they grew. Various antiseptics were used for the wound, which was also drained; the pleura had none of these applications. In contrasting these two cases of invasion of the *pleura* and of the *peritoneum* by streptococci, the most striking difference is the small production of lymph in the peritoneum and its thickness in the pleura. Associated with this we have to notice that the streptococci had penetrated deeply into the peritoneum, whilst the pleura was hardly affected at all. Moreover, it is singular that the streptococci are irregularly scattered throughout the peritoneal lymph and in the substance of the peritoneum itself, but in the pleuritic lymph they are collected into entangled masses of considerable size. (Compare Figs. 5 and 8.) The lymph which covered the pleura had the same physical characters as the lymph which I have produced in rabbits by the subcutaneous application of unsterilised croton oil or unsterilised mercury. This septic lymph differs but little physically from that which is caused by sterilised croton oil, sterilised mercury, or pure carbolic acid. Biologically and chemically the difference is great because bacteria and their

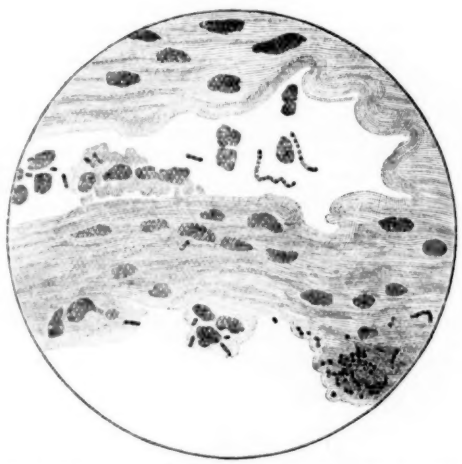
products are present in one case and not in the other. The presence of the bacteria has, when critically examined, a slight but important effect upon the physical characters of the lymph; it is more fluid, its edges are ill-marked and shade off gradually into the surrounding inflammation, and, last, it has hardly any tendency to organise. The lymph which is caused by carbolic acid and mercury in the absence of bacteria is firm and consistent, its edges are abrupt and sharply defined, and if the rabbit be killed a week after the application of the chemical, and injected with carmine gelatine, it may be seen with the naked eye that numerous small vessels have begun to penetrate the lymph. The organisation of some kinds of aseptic lymph seems, as far as I can ascertain, to have been overlooked by those who have worked at this subject. It is, nevertheless, a point of some interest and importance. The conditions under which septic lymph organises or disappears are worthy of inquiry. Recently I opened the abdomen of a boy seven years of age, who had diffuse septic peritonitis due to a perforation of the ileum. The abdomen contained pus and lymph, and much of the latter was left behind. The child recovered, but I have often wondered what became of the septic lymph which was left behind. In another case an incision was made over the cæcum for the purpose of finding the vermiform appendix. This was prevented by recent adhesions, which were so abundant and bled so much that they could not be separated without a great risk of lacerating the bowel. The cæcum was accidentally opened, and six weeks afterwards, when I closed the opening, to my astonishment the adhesions which had been so troublesome had disappeared and the cæcum and neighbouring intestines looked almost normal.

BACTERIAL INVASION OF THE PERITONEAL LYMPH PATHS IN SEPTIC PERITONITIS.

The foregoing observations tend to show that the intestinal bacteria do not, like the streptococcus pyogenes, easily penetrate into the substance of the peritoneum. The following, however, seems to suggest that after time has elapsed even the intestinal bacteria may invade the peritoneal lymph paths. It also illustrates how difficult it is in practice to distinguish betwixt operative peritonitis and perforative peritonitis.

CASE 6.—A man thirty years of age had suffered for five years with symptoms of gastric tumour or ulcer. These culminated in stricture of the pylorus, with dilatation of the stomach and its attendant troubles. To dilate the pylorus an abdominal section was done and an incision made in the front wall of the stomach. When the pylorus had been dilated this wound was closed with a row of sutures in the mucous membrane and another in the serous coat. For a few days the operation afforded some relief, and food was taken by the mouth. On the seventh day severe pain occurred in the region of the stomach, and upon the eighth day the patient died of septic peritonitis. This was not accompanied by any rise of temperature; indeed, his temperature was usually subnormal. I made an examination twenty-two hours after death, and found that the wound in the stomach had given way. The whole peritoneum was inflamed, with a quart of purulent fluid and stomach contents in the flanks and pelvis. There was much lymph around the wound in the stomach and about that in the abdominal wall, with some suppuration along the sutures. The piece of peritoneum which was examined was taken close to the wound in the abdominal wall. The ulcer in the stomach was not malignant[8] and the body was healthy, with the exception of what has been described. Histologically[9] the tissues of the peritoneum had not undergone much alteration. The surface-cells had proliferated and some inflammatory corpuscles infiltrated its substance, but this infiltration was not very marked. Nor was there much congestion of the bloodvessels. Amidst the lymph upon the surface were a great variety of bacteria, cocci, diplococci, and bacilli of various lengths and thicknesses. (Fig. 9.) Here and there the bacteria were collected into groups, and it was difficult to say whether there were swarms of short bacilli or clumps of staphylococci. Similar bacterial forms were seen in the adjacent lymph paths. But in these spaces chains of bacteria were conspicuous. It is difficult to say whether these chains consisted of cocci or of short bacilli. The lymph paths also contained bacilli of considerable size (Fig. 9). In addition to bacteria they were partially filled with exudation corpuscles, and some material which looked like coagulated albumen, such as is often seen in the renal tubules in certain kinds of acute nephritis. In the depths of the peritoneum, as far as the subperitoneal fat, there were small dense collections of bodies which had the appearance of cocci and diplococci. These were always arranged round a nucleus and were not contained in any space. I am ignorant of their meaning. Some, I believe,

FIG. 9.



Bacterial invasion of the principal lymph paths in diffuse septic peritonitis.

would call them phagocytes laden with bacteria.[10] The liver and kidneys of this case were also examined, but no bacterial invasion was discovered.

The history of the case leaves a doubt as to whence these bacteria originated. It is possible that they came from the outside, for the wound was septic, or from the interior of the stomach. The contents of the stomach possess a luxuriant flora and could well furnish the bacteria which were found; various articles of diet, the saliva, and the pharyngeal and nasal mucous membranes supply it with a vast variety of bacteria. De Bary's[11] work has an important bearing upon this question. He examined the contents of healthy and diseased stomachs. The acid material from healthy stomachs contained hardly any bacteria in comparison with that from cases of cancer of the pylorus, stenosis of the pylorus, or of ulcer of the stomach. Gillespie[12] and Macfadyen[13] found many varieties, including the bacillus coli communis. At the same time they note that healthy gastric juice has fair antiseptic properties; but Macfadyen and others have remarked that in the contents of the intestinal canal more bacteria can be distinguished microscopically than can be recognised in cultures inoculated from these contents. Barbacci has also tried to show that the bacillus coli communis is of less importance in causing perforative peritonitis than other bacteria which are present, but will not grow in cultures. Thus in the case just given either the stomach or the wound could furnish the bacteria seen in the lymph and in the lymph paths. The number of bacilli, however, suggests that they come from the stomach. The absence of any rise of temperature during the peritonitis also suggests that it was not caused by the ordinary pyogenic cocci. The presence of strings of bacteria in the lymph paths is consistent with what we already know of these kinds of organisms. In erysipelas, cellulitis, and lymphangitis the streptococci travel along the lymph paths, their passage being facilitated by their shape, which is well adapted for narrow channels; on the other hand, clumps of staphylococci

[8] The specimen is in the museum of St. Bartholomew's Hospital. (No. 1961 b.)

[9] I am indebted to Dr. Addison for much labour at these tissues. Our most successful specimens were stained with alkaline methyl blue.

[10] These specimens were stained with alkaline methyl blue.

[11] Beitrag zur Kenntniss der niederen Organismen im Mageninhalte. Archiv für Experimentelle Pathologie und Pharmakologie, 1886, Band xx., p. 243.

[12] Bacteria of the Stomach: Journal of Pathology, vol. i., p. 284.

[13] Journal of Anatomy and Physiology, vol. xxi., 1886, p. 237.

or of bacilli would, it might be supposed, find it difficult to pass along the narrow channels of the tissues. Thus we find that such an organism as staphylococcus aureus is usually associated with acute localised suppurations or inflammatory wound gangrene (Ogston), and streptococcus pyogenes with spreading inflammations such as erysipelas or cellulitis.

INTESTINAL BACTERIA IN OTHER CONDITIONS: HEPATIC ABSCESS.

During these investigations I have met with intestinal bacteria in other diseases besides perforative peritonitis, and it may not be out of place to refer to these occurrences. For instance, the following[14] illustrates their presence in abscess of the liver.

CASE 7.—A man who had lived six months in India and had had ague and dysentery there, returned to England, and had an attack of hepatitis in August, 1887. This seems to have subsided, and to have been followed by a second attack of dysentery and a fresh hepatitis in June, 1892. The abscess in his liver probably dates from this time. In February, 1893, Dr. Norman Moore diagnosed an abscess of the liver and obtained some pus from it with a sterilised needle and after proper disinfection of the skin. Having been called in to open the abscess, I performed laparotomy. As the liver was not adherent it was stitched to the edges of the wound, and forty-eight hours later the abscess was opened. The patient made a good recovery. Cultures inoculated from the wound before opening the abscess remained sterile; others inoculated from the pus grew the bacillus coli communis in pure culture. The pus was very thick and of a slightly greenish tinge, and occasional short bacilli could be seen in it, but living plasmodia were not looked for. The amœba coli was not sought for in this pus when it was fresh, but none could be seen in stained specimens. My colleague Dr. Galloway,[15] who has done good work at this subject, showed me the amœba coli in the pus of a hepatic abscess which I opened for a patient of Dr. Clifford Beale. I have recently failed to find the amœba coli in an empyema of the gall-bladder. The pus contained streptococcus pyogenes, and possibly other organisms.

The exact relation of the bacillus coli communis to hepatic abscess has been much debated by Kartulis, Councilman, Ostler, Manson, Galloway, and others, and will not, I venture to think, be decided by mere clinical or bacteriological evidence. Experimental pathology may, however, be expected to throw light on this question. Zancarol[16] performed a series of experiments by injecting dysenteric evacuations, hepatic pus, and cultures from hepatic pus into the recta of cats. These are, so far as I can tell, the only direct experiments upon this disease. Zancarol claims that any of these may produce dysenteric ulceration of the intestine with accompanying abscess of the liver. He seems doubtful whether the amœba coli causes abscess of the liver in dysentery. He attributes potent effects to streptococci. Although the following experiments performed upon rabbits teach but little, yet they show that the relationship of the intestinal bacteria to abscess of the liver is not so simple as at first glance it seems to be. I mention them here because they may be of help to others—at least by telling them what to avoid. Laparotomy was performed upon a healthy rabbit and a loop of intestine drawn out. Two cubic centimetres of a broth culture of bacillus coli communis, grown from the case of liver abscess which has just been described, were injected into the mesenteric vein. The animal died during the night, and slight peritonitis was found. The animal seems to have been poisoned by the culture. Next, the liver of another rabbit was exposed, and one cubic centimetre of a broth culture of the same bacillus was injected into it. At the end of a week the animal, which seemed to be fat and well, was killed. The injection appeared to have produced no result, but the presence of numerous psorospermal foci forbade any positive statements; at all events, no larger abscess or destruction of liver substance had occurred. The injection of a solution of rabbits' fæces in water into the mesenteric veins of another rabbit made the animal ill, and when it was killed at the end of a week there were found to be several small abscesses at the periphery of the liver; but here again the result seemed uncertain because so many psorospermal foci were present. These experiments made me think that something more than intestinal bacteria were required to cause hepatic abscess.

INTESTINAL BACTERIA IN OTHER CONDITIONS: TYPHOID ABSCESS.

It is now so well known that the typhoid bacillus can cause abscesses that a case in which that occurred would hardly be worthy of record if it did not also illustrate another point—namely, that bacteria may continue to live in the human body for months or years. This is shown by a case in which I found the typhoid bacillus in an abscess a year and three months after an attack of typhoid fever. The interval which elapsed between the infection and the discovery of the bacillus in an abscess was, I think, clearly substantiated. The patient was a young woman aged nineteen years, who came with a subacute abscess over the front of the tibia. It contained ordinary thick, dirty-yellow pus. The cells of this pus were degenerated, and amongst them were some bodies which were taken to be short bacilli. These grew upon gelatine with all the ordinary characters of typhoid bacilli. The gelatine was not liquefied, and the bacilli grew upon its surface in greyish white layers with irregular edges. In the depths it formed fluffy colonies. The growth was slow at summer temperature. The bacilli were about four times as long as they were broad, with rounded ends and with spores which did not cause any bulging; they grew occasionally in short strings of four or five elements. This patient said she had been liable to abscesses ever since she had been in hospital for typhoid fever. Dr. Goodall has kindly informed me that she went into the fever hospital on April 4th, 1892, with typhoid fever, and that whilst there her case was complicated with abscesses in the axilla and neck. The abscess from which I obtained the pus was opened on June 17th, 1893—at least one year and three months after the onset of the disease. It is so unlikely that this patient could have had a fresh infection with typhoid bacilli that I think we must conclude that those found in the abscess must have lived in her body for at least a year and three months after their introduction. During the greater part of their sojourn they seemed to have caused but little inconvenience to their host. With the exception of the subacute abscess, her health was good. The bacilli seem to have been living for months at the place where they afterwards caused the abscess, and had not been recently deposited there from the blood. The note says that during the months which preceded the abscess its site was occupied by a painful swelling which appeared and disappeared several times.

The typhoid bacillus seems particularly fitted for throwing light upon the question how long bacteria live in the body. Its early effects are so palpable that there is seldom much doubt as to the approximate data of the inoculation. Instances similar to that which I have recorded have been published by Hintze[17] and others, but none of the cases seem to have lasted so long after the fever. In Hintze's case the bacillus was found in an abscess of the chest wall two months after the fever; Werth found them in an ovarian cyst eight months after; Orloff found them in an abscess over the tibia six and a half months after; and others have found them at shorter times. It seems reasonable to suppose that other bacteria may lurk unnoticed long after their introduction. I ought to add that staphylococcus pyogenes aureus and the bacillus coli communis have been found in the abscesses which follow typhoid fever.

[14] I am indebted to Mr. Poynder for very clear notes of this case, and to Dr. Norman Moore for permission to use them.

[15] Brit. Med. Jour., March 31st, 1894.

[16] Pathogénie des Abcès du Foie. Revue de Chirurgie, vol. xiii. 1893, p. 671 et seq.

[17] Centralblatt für Bakteriologie und Parasitenkunde, 1893, vol. xiv. p. 445 et seq.: Ueber die Lebensdauer und die Eiter-erregende Wirkung des Typhus Bacillus im Menschlichen Körper.

THE Princess of Wales has sent £3 to the Rev. J. Trelawny Ross, D D., Vicar of Paignton, for an old Irishwoman, Mrs. Anne McLaughlin, of Limavady, who is 110 years of age, and whose husband served in the corps of yeomanry commanded by the Rev. Dr. Ross's grandfather in the beginning of the century.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—As St. Patrick's Day falls on a Sunday the annual meeting of this association will be held at 11, Chandos-street at 6 P.M. on Saturday, March 16th. The festival dinner will take place at 7 P.M. on the same evening at the Café Monico, Dr. H. Phillips-Conn in the chair. Application for dinner tickets should be made to Dr. Carney, 93, Wimpole-street, W.

The Arris and Gale Lectures

ON

THE CENTRAL NERVOUS MECHANISM OF THE RESPIRATION.

Delivered before the Royal College of Surgeons on Feb. 22nd, 1895,

BY WALTER SPENCER, M.S., M.B. LOND., F.R.C.S. ENG.,

SURGEON TO OUT-PATIENTS AND TO THE THROAT DEPARTMENT, WESTMINSTER HOSPITAL; LECTURER ON PHYSIOLOGY IN THE MEDICAL SCHOOL.

LECTURE III.

THE RESPIRATORY CENTRE IN ASPHYXIA.

GENTLEMEN,—Carbonic acid excites the respiratory centre, at first causing hyperpnœa by over-action of inspiratory muscles, and later dyspnœa with over-action of expiratory muscles. But the third stage of asphyxia is not due entirely to carbonic acid poisoning. The centre is suffering from want of oxygen owing to the failure of the circulation. Carbonic acid first excites the vaso-motor centre to over-action, and the blood pressure rises. But it soon paralyses the vaso-constrictor influence, and the blood pressure rapidly falls. In the same way carbonic acid excites the cardio-inhibitory centre and the heart is first slowed; but subsequently it acts on the heart and weakens the muscles. The failure of the circulation is therefore due to a paralysis of the vaso-motor centre and of the heart muscle. If a dog be deprived of air for less than four minutes it may spontaneously recover. After this period the heart is found to be beating slowly and feebly, and the blood pressure has sunk very low. The heart may continue to beat for six minutes after the cessation of breathing. The ventricles cease to beat before the auricles, which may go on for a little time longer, the beats being irregular, intermittent, or periodic.

In connexion with this continuance of the heart beat in asphyxia I am happily able to quote some experiments made by a past President of this College, Sir J. Eric Erichsen,[1] which he carried out under Professor Sharpey. The thorax of a dog being opened and the beat of the heart watched, the restoration of the heart and blood pressure always followed upon inflation of the lungs so long as the ventricles had not quite ceased to beat. He never succeeded in restoring the circulation of the animal by artificial respiration of air alone when once the ventricles had definitely stopped. The auricles might start a rhythmic beat, but this did not lead to the ventricles doing so. Nevertheless, when the heart of an asphyxiated animal had quite ceased to beat the artificial respiration of air changed the colour of the blood in the pulmonary veins, the left ventricle, and the coronary arteries, so that it became red, whereas the blood on the right side of the heart and elsewhere remained black. Following the clue given by the last experiment he used oxygen instead of air for inflation. He watched the heart of an asphyxiated animal until all movements had entirely ceased for two minutes, and then commenced inflation with oxygen. The blood in the pulmonary veins, left ventricle, and coronary arteries, as in the last experiment, became red, and in some of the animals the heart began to beat and the circulation was restored. These are the only experiments with which I am acquainted in which the possibility of starting the heart after it has once ceased has been shown in a way which can be applied to man.

In a patient who has ceased to breathe, but in whom the pulse is of full tension, although it may be slowed in rate, we may direct our attention to the removal of the causes of inhibition. Inhibition by afferent stimuli practically occurs from the pharynx or larynx, and breathing may start on the removal of foreign bodies, mucus, blood, or on drawing forwards the tongue, which has fallen back. This inhibition may also be neutralised and overcome by an afferent stimulus exciting inspiration. One of the most efficacious of these stimuli is that produced by drawing forwards the tongue, especially in rhythmic manner. Laborde[2] has recorded sixty-three successes by this plan. Presumably the effect is produced by the excitation of the fifth (lingual) or upper roots of the vagus (glosso-pharyngeal). There are also many other forms of excitation through sensory nerves which may evoke respiration; but if the patient has passed into the stage of asphyxia no effect can be expected from sensory excitation. In such a case artificial respiration and warmth offer the only means of improving the heart-rate and of increasing the force of the vaso-motor centre. When the vaso-motor centre has regained its control of the vessels it reacts to carbonic acid. On cessation of artificial respiration if the blood pressure rises one can with certainty predict that in a few seconds normal breathing will begin. Conversely, if on stopping artificial respiration the blood pressure begins to fall normal breathing will not occur. With regard to recovery in a person apparently dead, in whom breathing has not occurred for five minutes or more, we must conclude that the heart can in such cases only continue to beat when the production of carbonic acid in the tissues has been reduced to a minimum. Cases of recovery after long submersion can be explained by supposing an injury to the head, cold, shock, alcohol, or other cause to have greatly depressed internal respiration at the time of submersion. A man may thus remain under water reduced to the state of a cold-blooded animal. Very little carbonic acid passes from the tissues into the blood, and thus there is not sufficient carbonic acid to poison the heart muscle. Cases of submersion for as long even as half an hour have been followed by recovery.

Poisons other than carbonic acid may affect the respiratory centre, or their action may be combined with that of the carbonic acid imperfectly removed. Cocaine painted on the floor of the fourth ventricle[3] paralyses the respiration, and, being washed away by salt solutions, its effect passes off and normal breathing is resumed. Chloroform and ether act in the same way when directly applied to the bulb.

[The lecturer here referred to the dangers of chloroform anæsthesia. He continued:]

There are more rapidly fatal poisons, such as hydrocyanic acid and carbonic oxide gas. Even in such cases recovery is possible if oxygen can be administered early enough and the carbonic acid got rid of. Haldane[4] placed a mouse in a stream of carbonic monoxide. The animal became distressed, panted, and fell on its side, whilst the tips of its ears became brick-red in colour. If at this point a stream of oxygen were passed into the vessel containing the mouse the animal quickly gets on its legs and appears as well as before. Opportunities of applying artificial respiration and oxygen are, of course, not likely to occur frequently, for the man is generally burnt in the case of the carbon monoxide, and in suicide by hydrocyanic acid the person is alone. Opium, morphine, and chloral act more slowly, and therefore the application of means to excite the respiratory centre will be of much more service. There is a great resistance to these narcotics on the part of animals exposed to heat, and I need not remind you that it is of no use to administer oxygen in a case of failing respiration unless at the same time the carbonic acid be got rid of by artificially aiding the expiration. As to curare, when ozone is passed through a solution of it the substance loses its poisonous properties. It has, therefore, been conjectured that the action of curare may be to snatch oxygen from the nerve substance. A case is recorded of failure of respiration after a puncture by an instrument smeared with this drug. Recovery ensued after two hours of artificial respiration. Strychnine is no stimulant of respiration. When given in a sufficient dose it opposes inspiration by acting chiefly on the nerve roots of the spinal cord which supply the muscles of extraordinary expiration. It is the excessive and incoordinate action of these muscles which opposes the inspiratory action. Thus the respiratory centre becomes asphyxiated by excess of carbonic acid, whilst the abdominal muscles are violently contracted in each spasm. The indications for treatment are therefore two—the depression of the over-action of the expiratory muscles by narcotics whilst the respiratory centre is prevented from being asphyxiated by artificial respiration with oxygen. This method of treating a case of strychnine poisoning or of tetanus is obviously a difficult matter.

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[1] An Experimental Inquiry into the Pathology and Treatment of Asphyxia, second edition, 1847.

[2] Tractions Rythmées de la Langue. Paris, 1894.

[3] Aducco: Archives Italiennes de Biologie, 1890, tome xiii., p. 89.

[4] Proceedings of the Physiological Society, 1895.

THE RESPIRATORY CENTRE UNDER INCREASED INTRACRANIAL PRESSURE.

The circulation through the centre may be impaired by cutting off the main supply or by resisting its entrance to the bulb by increasing intracranial pressure. The result is the same in the two cases—at first excitatory and secondly paralytic phenomena. The first effects of severe hæmorrhage are panting and deep inspiration.[5] Indeed, compression of the carotids is sufficient to cause quickening of the respiratory rate.[6] The skull is a cavity which is closed except for veins, lymph channels, and the communication with the spinal cord. The subarachnoid space is continuous with the ventricles by the lymphatics of the pia mater and through the brain substance with the spaces in which the cells lie. It also communicates with the venous sinuses. The pressure of the cerebro-spinal fluid is therefore intermediate between the blood pressure in the capillaries and that in the veins—viz., about 10 to 15 mm. Hg; and it can be seen to form as beadlike drops upon the pia mater, which has been first dried. Salt solution infused into the subarachnoid cavity is rapidly absorbed. Respiration is unaffected by the free exposure of the subaracbnoid space. A slight diminution in the contents of the cranium—e.g., by a blood-clot or foreign body—may be compensated by a displacement of an equivalent amount of fluid into lymphatics or into the spinal cord, the fluid being squeezed out of the brain as water from a sponge. If a little pressure be applied slowly it may be borne without causing symptoms. If the pressure be applied suddenly symptoms which at first occur may disappear as soon as fluid has had time to escape. When from previous disease the exit by the lymphatic channels has been partly blocked by some inflammatory condition the slightest increase of intracranial pressure has set up a severe obstacle to the circulation through the vital centres. The results of a series of experiments on intracranial pressure have been published in a paper by Mr. Horsley and myself.[7] A classical experiment, which consisted in setting up intracranial pressure sufficient to affect the bulb, was made by Sir Astley Cooper.[8] He trephined a dog and pressed with his finger upon the dura mater. The dog became insensible, then comatose, and the pulse slow. When the pressure was released the animal recovered. We employed chiefly a thin rubber bag inserted through a trephine hole which was then filled by mercury. By this means we could raise or lower the pressure, estimate the amount of diminution in the contents of the skull by the amount of mercury running into the bag, and regulate exactly the pressure required by the height of the mercury column above the level of the skull. In dogs of medium size we found with Duret[9] that the cranial contents could be diminished as much as 5 c.c. without any marked symptoms except an increase in the anæsthetic state of the animal. Whatever may be the slighter effects of intracranial pressure in the direction of local excitation, they were practically excluded by the anæsthesia employed; indeed, they are unimportant for the subject under consideration as compared with the mass displacements of the brain. The pressure applied to any part of the cerebrum tended to displace it backwards upon the cerebellum and bulb. This could be lessened or avoided by removing part of the occipital bone. The cerebellum bulged through the hole and the symptoms of pressure were diminished. We obtained symptoms of an identical character by direct pressure on the bulb, and there we were able to differentiate the cardiac from the respiratory effect.

The effect of increased intracranial pressure was primarily excitatory, causing inspiratory spasm, and finally paralytic, as shown by a diminution in amplitude, a slowing of the rhythm, and finally by arrest of respiration. A similar excitation caused slowing of the heart with a fall of blood pressure. After the arrest of respiration the heart greatly slowed and tended to stop. If the intracranial pressure was immediately taken off recovery ensued in the following order: (*a*) recovery of heart-rate, (*b*) rise of blood pressure, and (*c*) starting of respiration. If the intracranial pressure was severe and rapidly applied, the heart might be momentarily checked as by a strong excitation of the vagus nerve. Then the heart recommenced by slow excursion, which died out as the carbonic acid in the blood increased. If, however, artificial respiration was carried out the gradual paralysis of the cardio-inhibitory centre could be seen. The heart beat more rapidly and the blood pressure rose as if the vagi had been divided. This rise of blood pressure was due not only to the cardio-inhibitory paralysis, but also to excitation of the vaso-motor centre, for additional intracranial pressure caused a further rise; we obtained extraordinarily high blood pressure after the removal of the cardio-inhibitory influence. Frequently the blood pressure rose to 300 mm. Hg—i.e., was doubled; but the highest reached in several experiments in the dog was 400 mm. Hg. This rise of blood pressure acted as a direct stimulus to the respiratory centre. Breathing frequently began again in spite of the continuance of the intracranial pressure which had immediately arrested it when the blood pressure was at its normal level. But the rise of blood pressure was only temporarily maintained. If the intracranial pressure was continued the blood pressure soon fell to 30 mm. Hg, indicating paralysis of the centre. When pressure is applied directly to the upper end of the spinal cord there is arrest of respiration without the heart being affected, supposing artificial respiration to be soon begun. When the pressure is applied in the upper part of the fourth ventricle the heart may be slowed down, whilst the respiratory rate is retained or even accelerated—i.e., an excitation of both centres. When the pressure is applied to the lower part of the fourth ventricle the respiration tends to be inhibited and the heart slowed. This is the general effect of intracranial pressure by an excitation of the cardio-inhibitory centre with an inhibition of respiration. Collapse or shock was obtained not only as the effect of severe intracranial pressure, but also followed a number of the different kinds of excitation which I have described. Many of the animals have brought the experiment to a conclusion by more or less suddenly lapsing into a condition of low blood pressure, feeble heart, and a respiration characteristic of the third stage of asphyxia. But the condition differs from asphyxia in not being easily amenable to artificial respiration. We have here a rapidly occurring vaso-motor paralysis by means of afferent stimuli through the respiratory apparatus.

Many cases which have been described show the importance of the removal of intracranial pressure. Thus[10] a man who had dislocated his atlas vertebra was found senseless with respiration slow and interrupted, the pulse scarcely to be felt, and paralysis of the spinal cord below. The dislocation being reduced with an audible snap the man soon got well. A similar case under Mr. Horsley of pressure on the upper part of the spinal cord from caries of the spine had not only paralysis of the spinal cord but stertorous breathing. After laminectomy respiration immediately became free, and the boy regained the power to walk. Other cases in which respiration only has failed would have been, as proved post mortem, amenable to surgical interference. Thus in one case artificial respiration was continued for twenty-four hours, during which the heart beat strongly, and it did so for a few minutes afterwards. On post-mortem examination a cerebellar abscess was found. In another case artificial respiration was kept up for six hours, and a cerebellar abscess was afterwards found. In a third artificial respiration was performed for eight hours and a half; the pulse, at first strong, gradually became feebler (vaso-motor paralysis) and finally ceased. A cerebellar cyst was found. I have mentioned these to emphasise the importance of surgical exploration in order to try to relieve the pressure.

Intracranial pressure may arise from hæmorrhage. If the hæmorrhage comes to a standstill a similar amount of cerebro-spinal fluid may be absorbed, and so the symptoms be relieved. It is, therefore, of the first importance to arrest the bleeding. A compression or ligature of the external carotid may stop extravasation of blood from the middle meningeal artery. In conjunction with Mr. Horsley I have published a paper,[11] in which it was pointed out that the circulation through the middle cerebral artery, and especially through the lenticulo-striate artery of the monkey could be so controlled by compression of the carotid that a clot soon forms and blocks the mouth of the artery. We pointed out that as the lenticulo-striate artery is practically the continuation upwards in a straight line of the internal carotid, it must receive more of the force of the blood stream than the rest of the circle of Willis. Herein lies the reason why it is so frequently diseased as to be the

[5] Kussmaul und Tenner: Moleschott's Untersuchungen, 1855, i p. 92.
[6] Geppert und Zuntz: Pflüger's Archiv, 1888, Band xlii., p. 189.
[7] Philosophical Transactions, 1891, p. 201.
[8] Lectures on Surgery, 1824, vol. i., p. 300.
[9] Traumatismes Cérébraux. Paris, 1873.
[10] Ehrlich: Chirurgische Beobachtungen, vol. ii., No. 25.
[11] Brit. Med. Jour., vol. i. 1889.

cause of 70 per cent. of cases of apoplexy. Being therefore the continuation of the internal carotid the circulation through the vessel is particularly weakened by compressing the carotid. We suggested that these experiments might point to the employment of compression or ligature of the common carotid artery in cases of ingravescent apoplexy. The suggestion has been taken up in America, and one of two cases appeared to have been benefited; at any rate, the ingravescent apoplexy was cut short.[12] During this week Dr. Washbourne has sent me the notes of a case under his care in Guy's Hospital. The patient had the symptoms of progressive hæmorrhage from the lenticulo-striate artery, and Mr. Dunn ligatured the common carotid. The hæmorrhage was apparently arrested, but there were severe pulmonary and renal complications. Death ensued two days afterwards. Where hæmorrhage has already occurred from the middle meningeal, the clot has been forced out of the trephine hole, showing the great pressure under which it was placed. Whether the removal of an apoplectic clot will be found practicable I do not know. Until the mouth of the ruptured vessel be plugged hydrodynamical conditions keep the clot under the same pressure as that of the blood-pressure, the latter being in the early stages far above normal. In any case it must be remembered that it is the failure of respiration which first happens, and artificial respiration may keep the centre and the heart from asphyxia until sufficient fluid has escaped from the brain to compensate for the room occupied. In such cases not only may cerebro-spinal fluid be removed, but the blood serum may be gradually absorbed and the blood-clot occupy so much less space as to allow respiration to start again.

RHYTHMIC AND PERIODIC (CHEYNE-STOKES) RESPIRATION.

Spontaneous rhythmic movement is a fundamental property of protoplasm as seen in the pulsating vacuole of a protozoon. Nerve cells originate rhythmic movement—e.g., the ganglion cells in the margin of the bell of a medusa. The rhythmic respiratory movements in the larvæ of some insects—e.g., Libellula[13]—may continue in detached segments, provided that one pair of the ventral chain of ganglia be included in the separated segment. Sir James Paget long ago expressed the belief that rhythmic motion is an issue of rhythmic nutrition. Rhythmic movement becomes periodic when the nutrition of the cells is failing, and is thus seen in the dying heart. Periodic respiration may depend upon periodic variations in the blood-supply, or in a prolongation of the time taken for the building up of a hypothetical inogen before kinetic energy can be liberated in the shape of an inspiration. Periodic respiration is seen in the deep sleep of young children and animals after the administration of somnific doses of morphia and chloral. A small amount of intracranial pressure in an anæsthetised dog may cause the respiration to become periodic. This kind of periodic respiration may occur in patients, and forms an incomplete type of Cheyne-Stokes respiration without the apnœic pause. Marked cases of Cheyne-Stokes respiration[14] have never, so far as I know, been produced experimentally. It is an extraordinary phenomenon, especially the placid, almost anæsthetic state of the patient during the apnœa, as compared with the excited, sometimes even distressed, state of the patient when respiration has reached its maximum. In producing periodic respiration in animals exaggeration of the vaso-motor or Traube's curves may be noted as occurring at the same time. This variation in blood pressure may be sufficient to influence a weak respiratory centre. Recovery may ensue even when Cheyne-Stokes breathing has existed for months. In asphyxia, exhaustion, or after partial destruction of the bulb, where the animal is dying and the respiration of the kind which occurs in the third stage of asphyxia, there may be seen a periodicity of short inspirations or gasps. This periodicity perhaps arises from delay in the building up of the hypothetical inogen.

In these three lectures, gentlemen, I have brought before you such parts of the subject as have appeared to me to yield matter of practical value. Lack of time, insufficient evidence, and difficulty in forming conclusions are my reasons for passing over the rest without reference. I have to thank the President and Council of the College and the Curator for the opportunities afforded me for lecturing on the subject.

[12] Dercum and Keen: THE LANCET, Oct. 13th, 1894.
[13] Baudelot: Comptes-rendus de l'Académie des Sciences, 1864, tome lviii., p. 1161.
[14] Dixon Mann: Brain, 1890, p. 178.

A CASE OF PERFORATION OF THE GALL-BLADDER FOLLOWING TYPHOID FEVER SUCCESSFULLY TREATED BY ABDOMINAL SECTION.

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AND
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Remarks by Mr. Monier-Williams on the medical history of the case previous to operation.—I was called on Sept. 18th, 1894, to see a married woman aged thirty-one years. She complained of pains all over the body, especially in the legs, severe headache, sleeplessness, and great weakness. The family history was unimportant. In connexion with her previous health was noted the fact that in 1883 she had a very severe attack of sudden abdominal pain accompanied by shivering fits, for which she was attended by Sir Francis Laking. The present illness commenced on Sept. 13th with headache, sore-throat, aching of the limbs, and shiverings; and the same symptoms persisted until I saw her five days later, when she had taken to her bed for the first time. I then found the temperature 103·5° F., the pulse 120, compressible, and dicrotic, and the tongue moist with a thin white coating. There was profuse perspiration and intense weakness. Percussion and auscultation showed the heart and lungs to be normal. The respiration was 20 to the minute, and there was fair abdominal breathing. The appetite was bad, and there was great thirst and much flatulence. Slight distension of the abdominal walls was present, and there was some tenderness in the right iliac fossa, but no abdominal pain. The spleen was enlarged and tender, and could be felt below the costal margin. The bowels had been slightly confined since the commencement of the illness. The urine on examination was found to be normal. A small dose of calomel was ordered, and an effervescing citrate of ammonia mixture. The next day, Sept. 19th, the bowels were freely open, and the motions were loose, of a yellow ochre colour, and very offensive. During the next two or three days the temperature oscillated between 102·5° and 103·5°, the pulse remained at about 120, the bowels were open once daily, the motions being of the same character as above, and the diagnosis of typhoid fever was made. On Sept. 21st, the ninth day of the disease, three or four pink spots appeared on the abdomen, but they were not sufficiently characteristic of the rose rash of enteric fever. On Sept. 23rd, the eleventh day of the disease, the patient was seized early in the morning, quite suddenly, with acute pain in the abdomen, and I was at once sent for. On arriving I found her in a semi-collapsed condition, with feeble, fluttering pulse and cold, clammy skin, complaining of agonising pain in the abdomen. The temperature shortly before the commencement of the pain was 102·5°, but now, two hours later, had fallen to 99°. Abdominal breathing was practically absent. The pain was diffused over the upper part of the abdomen, a spot a little above the umbilicus being perhaps the seat of its greatest intensity, and there was considerable tenderness in this situation and over the region of the ascending colon. I considered the possibility of a perforation of the intestine, even at this early date, and ordered opium freely and stopped all food by the mouth. A little later in the day Dr. Isambard Owen kindly saw the patient in consultation with me. She was then much relieved of her pain, the tenderness was less, and there was some slight abdominal breathing. Dr. Owen thought that the case was probably one of typhoid fever, and that we had to deal with an intestinal perforation, though possibly not a complete one. Opium was now administered less freely, but the patient was still fed only by the rectum. Twelve hours after the onset of collapse the temperature rose to 104·5°, the highest point reached during the illness. In a few days' time all pain and tenderness had disappeared, opium was discontinued, and on Sept. 27th, the fifteenth day of the illness, nourishment was taken by the mouth again in the ordinary way. The case was now taking the course of an apparently moderately severe case of typhoid fever without complications. There was a gradual fall of temperature towards the close of the second week, but a rise

again occurred, and during the third week the evening temperature varied from 102·5° to 103·5°. During this period of the illness the pulse kept at about 110, and was small and easily compressible; the bowels were inclined to be confined, the motions being sometimes quite loose and sometimes almost formed, but always very offensive and of a yellow ochre colour. The patient suffered from profuse perspirations, slept very little and occasionally wandered at night, and was much prostrated. The tongue was surprisingly clean and fairly moist, and was not like the dry-coated tongue generally seen in enteric fever at this stage. The treatment consisted of a pill of two grains and a half of thymol three times a day. My partner, Dr. Weldon, attended the patient for a few days at this time, and concurred in the diagnosis of typhoid fever. During the fourth week of the illness the temperature fell gradually by lysis, and at the end of the week reached the normal, where it practically remained for the ensuing fortnight except for a slight temporary rise towards the end of the sixth week due to fæcal accumulation, and which subsided directly the bowel was choroughly emptied by means of an enema. The stools were now much less offensive, but still rather light in colour. On Oct. 28th the patient was practically convalescent. The abdomen was natural in every respect, there being nothing abnormal to be made out either on palpation or percussion. The bowels were acting regularly, and the temperature having been normal for a fortnight, solid food was cautiously commenced. During the night of the 29th the patient experienced some slight abdominal pain, but not severe enough to keep her awake. On the morning of the 30th, however, I found her suffering from severe pain, which she referred to the region of the hepatic flexure of the colon, and here there was considerable tenderness. Later in the day the pain was much worse, shooting through to the back, and the temperature had risen to 101·2°. The pain was still limited to the region above mentioned, and there was now an area of about the size of an orange decidedly dull on percussion and very tender. Opium was freely given and rectal feeding ordered. Later in the evening Dr. Whipham saw the patient in consultation with me, and the question of a possible intestinal perforation was again discussed. Dr. Whipham was not inclined at that particular moment, however, to take such a serious view of the case, and thought that fæcal accumulation would account for the symptoms then present. The next morning (Oct. 31st) the patient was much worse. There was decided distension of the abdomen and signs of a localised peritonitis in the right hypochondrium. The temperature was 102° and the pulse 140, feeble and running in character. Later in the day the temperature had risen to 103°, and judging that abdominal section might be expedient I asked Mr. Sheild to see the patient with me. Before proceeding to the joint report of the subsequent surgical treatment of the case I would note the following points of interest. The temperature chart, although fairly typical of enteric fever, was not absolutely so, the morning remissions of temperature being greater than we are accustomed to see. The tongue, as above stated, had only a thin white coat and was moist; but this, experience shows, is not uncommon in typhoid fever. Finally, as to the sudden attack of abdominal pain with collapse on the eleventh day of the disease, are we justified in considering this to have been due to an incomplete intestinal perforation, or was it caused by some similar condition of the gall-bladder, which temporarily healed, but subsequently relapsed into the state shown by the operation to be present, and shortly to be described? An intestinal perforation as early as the eleventh day is rare, but Dr. Osler has recorded more than one case at the eighth day. It is also perhaps worth noting that the patient ate freely of oysters sixteen days before the onset of her illness.

Conjoint report by Mr. Monier-Williams and Mr. Marmaduke Sheild.—When we saw the patient together on the evening of Oct. 31st her condition was very serious. The abdomen was tympanitic and exquisitely tender, especially over the right side. The seat of most acute pain and tenderness was to the right and above the umbilicus. The temperature was 103° and the pulse 140, very weak and with that well-known running character which so often heralds approaching death. The extremities were not cold, the tongue was clean, and the patient was rational and could converse. The face was pinched and anxious, but lacked the appearance of death-like collapse so generally noticeable in perforation of the intestine from typhoid ulceration. Here it may be observed that the patient was well under the influence of opium. No flatus or fæcal matter had lately passed per rectum. Everything seemed to point to perforative peritonitis, but it seemed to us that to subject her to an abdominal section while the pulse manifested the symptoms above described was perilous in the extreme, if not hopeless. We also could not but reflect that she had recovered from a similar though, of course, less severe attack before, and we then determined to wait until the morning. Nutrient enemata with laudanum were given through the night. We saw her early on the morning of Nov. 1st. She then seemed somewhat better, and the pulse though rapid was stronger. The abdominal conditions were worse. The abdomen was more tympanitic, the abdominal walls being quite motionless. After anxious consideration it was now determined to operate, and we were inclined to the belief that a perforation in the small intestine would be found. The operation was performed at twelve o'clock on Nov. 1st. Mr. Arthur Ward assisted, and Dr. Grant Morris administered an anæsthetic mixture. It was difficult to carry out under the circumstances all the elaborate technique of an aseptic abdominal operation, but we aimed at doing our best. Very few instruments were employed, and these were boiled and immersed in 1 in 20 carbolic solution. The skin of the abdomen was cleansed with soap and water and sponged with the same lotion, and the limbs were swathed thickly with cotton-wool. Nine sponges only were employed to simplify counting and after recognition. A free abdominal incision was at once made in the median line commencing above the umbilicus, and the cavity was opened without delay. The distended intestines were received in a warm towel by Mr. Ward, and held over to the left side. It was at once obvious that the most acute focus of inflammation was situated in the right hypochondriac region. The intestines here were much blown up, red and congested, and covered with purulent lymph, while among their coils some free turbid fluid could be seen welling up posteriorly. The incision was extended upwards to the under surface of the liver, where was much purulent lymph matting the tissues together. Believing that a perforation existed towards the upper part of the intestinal canal, diligent search was made, but none could be detected, and while disentangling the adhesions and sponging away the soft lymph under the liver the gall-bladder came into view, and its appearance was peculiar and suggestive. This viscus was deeply inflamed, of a dark-plum colour, rigid, thickened, and adherent, but not much enlarged, though tightly distended. The source of mischief was soon apparent, for low down near the neck of the gall-bladder was a sharply circular, sloughy ulcer the size of a threepenny piece. Its floor was bright yellow, and it was surrounded by a vivid red zone of intense hyperæmia. On stroking it with the probe fluid escaped at one spot, showing that leakage of the contents had already occurred. A fine trocar was now introduced, but to our surprise nothing escaped, and the gall-bladder was opened at its fundus by a stroke from the scissors. About one and half ounces of thick, offensive pus, not mixed with bile, were evacuated into a glass held in the abdominal cavity, sponges being packed round to prevent further contamination of the peritoneum. The gall-bladder was obviously converted into a suppurating sac, probably cut off from communication with the biliary flow. The viscus was cleaned out with pledgets of wool held in the forceps, and a careful search made for a calculus by a probe internally and the finger externally. Nothing of the nature of a stone could be detected, and it was uncertain what caused the closure of the cystic duct. The tissues were so rotten that the probe was used with much caution, and no prolonged attempts were made to pass it into the common duct. The sloughy ulcer near the neck of the gall-bladder had now quite given way, and I (Mr. Sheild) tried to unite it after the Lembert method; but the stitches cut their way out persistently, though deeply placed. It was obvious that the gall-bladder was too soft and lacerable to deal with, still less to bring it to the surface the abdominal wound. So much time had already been expended that the idea of its complete removal was out of the question. The wound in the fundus was therefore attached to the parietal peritoneum, and the parts under the liver cleansed by flushing with warm water and repeated sponging. An incision was made at right angles to the former, reaching towards the right lower ribs, to allow of more dependent drainage. The next step was to deal with the intestine. A fine trocar was introduced into the enormously distended ascending colon. The puncture was made obliquely, running for some distance along the longitudinal bands before perforating the mucous membrane. A large quantity of flatus escaped, aided by

Mr. Ward manipulating the intestine towards the puncture. By this means the intestines were flattened, and after further cleansing were returned to the peritoneal cavity. A glass tube was now passed deeply into the lesser cavity of the peritoneum, and a long and liberal slip of carbolised gauze was firmly packed round it so as to flatten the now empty gall-bladder against the under surface of the liver, and shut off the intestine from contact. The abdominal wound was closed with all rapidity with fishing-gut sutures and varnished over with collodion, being finally covered with a cyanide gauze dressing. The operation lasted exactly one hour, and at its expiration the condition of the patient was satisfactory; indeed, after the hot-water flushing the pulse somewhat improved.

In the after-history of the case we wish as far as possible to be brief, only mentioning the more important particulars and purposely omitting minute references to all the variations of pulse and temperature, and modifications in dietary, which are so essential to observe in the treatment of cases of abdominal section. On the evening of Nov. 1st we found the patient suffering from considerable collapse; she had vomited urgently several pints of greenish fluid. The pulse had fallen to 108 from 148 before the operation, and the temperature was reduced to 99·8°. Small nutrient enemata containing laudanum were ordered at frequent intervals and half-grain doses of opium by the mouth. The sickness continued through the night and the greater part of the next day, when it somewhat abated. On Nov. 3rd the symptoms were, on the whole, more favourable. The sickness was less troublesome and the wound was uniting well. The glass tube was washed out; there was only scanty discharge of bloody serum. The gauze was removed with some difficulty. It was firmly adherent and covered with healthy looking plastic lymph. All nourishment was given by the rectum. As there was slight abdominal distension and no flatus had passed we gave a saline purge in the evening, and the bowels were opened on the morning of Nov. 4th. The motions were darker in colour and partly formed. The sickness had now practically ceased, the patient's pulse and temperature were more satisfactory, and the chance of recovery seemed good. Nourishment was given by the mouth on Nov. 6th, and as more and more nutriment was taken by the natural channel the nutrient enemata were gradually lessened. On Nov. 7th a purulent discharge was observed from the tube for the first time. The discharge was sweet and quite devoid of bile. The tube was frequently filled with warm antiseptic lotion and aspirated. The wound, apart from the tube aperture, had now securely healed, and the bowels acted generally daily. All nourishment was now given by the mouth. The glass tube was removed and a rubber tube substituted. On Nov. 11th solid food was given for the first time. On Nov. 12th some severe pain was experienced of a colicky nature towards the right hypochondrium; this symptom persisted on the 13th. We were never able to explain it, and it passed away under subcutaneous injections of morphia. The tube, which had been gradually shortened, was entirely removed on Nov. 15th. About Nov. 17th the sinus had practically healed. The patient, who about this time was under the care of Dr. Weldon, got up on Nov. 24th, and went to Bournemouth on Dec. 18th wearing an abdominal belt. She is now well, but a small superficial sinus in connexion with a suture has lately been divided under nitrous oxide gas. A bacteriological examination was made of the pus by Dr. Slater of St. George's Hospital, and none of the ordinary organisms of suppuration were found, but antiseptics had been diligently used and might have modified the conditions really present. We regret that such an examination of the purulent contents of the gall-bladder was omitted amid the anxieties of a difficult operation.

In our remarks on this very interesting and important case we propose first to shortly review the literature of suppuration of the gall-bladder not dependent upon gallstones, and then we shall be in a better position to explain the probable nature of the case we have shortly narrated. We may at once say that suppurative cholecystitis apart from calculi is exceedingly rare. The English text-books except that of Murchison are silent on the possibility of suppuration of the gall-bladder occurring in connexion with typhoid fever. Osler[1] writes of "acute phlegmonous cholecystitis," and says "that it is a rare event; only seven instances of it have been recorded in the enormous statistics of Courvoisier. In a case which I reported the patient died on the fifth day with symptoms of the most intense prostration, fever, and abdominal pain. Perforation may occur, with fatal peritonitis. Empyema of the gall-bladder is much more common, and in the great majority of cases is associated with gall-stones." Pepper[2] devotes a short article to inflammation of the gall-bladder and biliary ducts associated with pneumonia, typhoid and malarial fevers, and also in acute gastro-duodenitis from poisons and other causes. He mentions that when the cystic duct is obliterated and a suppurative cholecystitis present an empyema of the gall-bladder may burst and give rise to fatal peritonitis. He points out also that the patient may suffer from chills, recurring at irregular intervals and followed by sweating, the temperature being elevated to 103° and upwards. Murchison, in his well-known work on the continued fevers, alludes markedly to suppuration of the gall-bladder in association with typhoid fever. "The lining membrane of the gall-bladder," says this writer, "is very liable to become inflamed in enteric fever without producing any marked symptoms during life. ..... Sometimes it is catarrhal, and the gall-bladder is proved to contain pus, as in the case related by Louis and in several which have occurred in my own practice." Murchison also refers to the diphtheritic form of inflammation as described by Rokitansky; and, lastly, he speaks definitely of the presence of ulcers in the mucous membrane of the gall-bladder, and refers to cases of this nature recorded by Andral, Jenner, and Trousseau. The same writer refers to a case which has many similarities to our own. A youth aged nineteen, in the London Fever Hospital, was seized with symptoms of peritonitis on the fifteenth day of enteric fever and died within twenty-six hours. The cause of the peritonitis was a perforating ulcer of the gall-bladder, which had allowed the bile to escape into the peritoneum. In connexion with this case reference is made to similar instances in the practice of Continental physicians and to a case of perforation of the gall-bladder in the practice of Dr. G. Kendal; but here gall-stones also existed. Drs. Gilbert and Girode, in the reports of the Biological Society of Paris for Saturday, Dec. 2nd, 1893, relate a case of purulent inflammation of the gall-bladder as a sequel of enteric fever. The pus, according to these authors, contained the "typhoid bacillus." The operation of cholecystotomy was performed five months subsequent to the typhoid attack, but the discovery of calculi throws doubt on the true nature of the case. Again, Gilbert and Dominici, writing in the reports of the Biological Society of Paris for Dec. 23rd, 1893, assert that they succeeded in producing suppuration in the gall-bladder and liver of rabbits by injecting a culture of the typhoid bacillus into the common duct. The gall-bladder was found thickened and full of pus, and foci of suppuration were scattered through the liver. Dr. Hale White, in vol. xiii. of the Pathological Society's Transactions, relates a case of fatal typhoid fever in a lad aged seventeen years. Characteristic ulcers were found in the liver and part of the ileum, and there was recent peritonitis round the gall-bladder, matting that organ and the lower edge of the liver to the intestines. The lymph was very soft, almost purulent. The gall-bladder was distended so that it measured 6½ in. in length and 3 in. across. Its walls were very thin, and in some places almost perforated. The bile which distended the gall-bladder appeared normal, and there was no obstruction to its flow. It will thus be seen that we have evidence to show that suppuration and ulceration of the gall-bladder do occur as a rare complication or sequel of typhoid fever.

As regards the case narrated by us, it is open to anyone to assert that it was not really enteric fever, but that the suppuration was due to some other cause, and the fever to septic absorption and pylephlebitis. The diagnosis of typhoid fever was, however, at least as certain as is usually the case; the spleen was early felt to be enlarged, and the motions were characteristic. The bright yellow colour, sharply circumscribed margin, and vivid zone of hyperæmia which surrounded the ulcer were very suggestive of the enteric origin of the latter, and we are inclined to the belief that thus may be explained the nature of this remarkable case. Whatever was the exact origin of the ulcer it makes little difference to the surgical conduct of the case. We are inclined to lay stress upon the following points of interest in connexion with the surgical and after treatment. 1. The case affords an instance of the importance of abdominal

[1] Principles and Practice of Medicine.

[2] Text-book of the Theory and Practice of Medicine, vol. ii., p. 955.

section in grave and doubtful abdominal symptoms suggestive of perforation, and illustrates what may be accomplished by the aid of plenty of warm water and cleanliness. 2. The question of dealing with a sloughy perforated gall-bladder was the greatest point of importance and a matter of much embarrassment. Removal of the entire organ, with closure of the duct, was contemplated, but rejected on account of the time which had elapsed before the true nature of the case was recognised. We are inclined to lay great stress on the value of the gauze tampon in this case, and venture to express our belief that this valuable method hardly receives due recognition in cases where septic cavities communicate with the abdominal cavity. 3. The principle of drainage in a dependent position was also illustrated, and a posterior opening would probably be very advantageous in purulent collections between the stomach and the liver. The method of oblique puncture of the colon has already been alluded to by one of us in a debate at the Royal Medical and Chirurgical Society.[3] 4. In the after treatment we need only allude to the rectal feeding, careful nursing, and the early opening of the bowels by saline purgatives.

Finally, we hope and believe that the condensed history of this case will be an important addition to the surgery of the gall-bladder, and we are of opinion that this is the first time that the operation of abdominal section has been successfully performed for so rare a condition as perforating ulcer of the gall-bladder not associated with calculous disease of that viscus.

COLITIS.

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PHYSICIAN TO GUY'S HOSPITAL.

TWO correspondents[1] have recently written to THE LANCET asking for information on the subject of colitis. As I have seen several cases of it both during life and in the post-mortem room, and have recently collected a number from the post-mortem records of Guy's Hospital and various publications, I thought it might serve a useful purpose if I briefly drew attention to the chief varieties. Much fuller details will be given under the heading "Diseases of the Colon" in the "System of Medicine" about to be published under the editorship of Professor Allbutt. The colon is affected by a number of well understood diseases, as dysentery, tuberculosis, cancer, and anthrax, and in the post-mortem room many other extremely interesting conditions—as, for instance, follicular and distension ulcers and the forms of colitis associated with pyæmia, Bright's disease, &c.—are seen; but, apart from all these, there appear to be three forms of colitis of clinical interest, which may be termed "simple colitis," "membranous colitis," and "ulcerative colitis."

1. *Simple colitis.*—The chief symptom of this is diarrhœa. The motions contain much mucus and usually small, but sometimes large quantities of blood, which is fluid and but little altered, having clearly come from low down in the bowel. Under the microscope unaltered red blood cells, some leucocytes, and triple phosphate crystals may be seen. Early in the case there is usually very little fæcal matter. The onset is generally sudden; the bowels may be open many times a day, and in most cases there is some abdominal pain (for the most part along the course of the colon), especially during defecation, but it is not often excruciating, nor is tenesmus very marked. Abdominal tenderness is nearly always present, chiefly over the sigmoid flexure, but it may be over the whole colon or the whole abdomen. The rectum may feel a little rough, and may be injected and covered with mucus; the tongue is covered with a white fur, but is commonly free at the edges and tip. If the case is severe the temperature is raised, and if the diarrhœa continues the patient loses weight. Flatulence, abdominal distension, loss of appetite, nausea, and vomiting may all be present, but are not commonly very striking. There is nothing noteworthy about the pulse, for its characters are the same as are usually observed in any severe abdominal disease. The cases vary much in severity, and if untreated may drag on for some time, even proving fatal. The patients are often of a depressed, hypochondriacal turn of mind. The most important part of the treatment is to put the patient to bed, to keep him warm, and to give him only small quantities of milk at frequent intervals. Opium, bismuth, and compound catechu powder are valuable for checking the diarrhœa, but directly it appears that this is about to cease astringents should be withheld, for the subsequent constipation is often very troublesome. It is best overcome by rectal injections of glycerine or warm olive oil. The hæmorrhage is rarely severe enough to call for special treatment; probably injections of equal parts of water and liquor ferri perchloridi thrown as high up the rectum as possible are the best remedy. Milk or at the most farinaceous diet and complete rest in bed must be continued till all the symptoms have disappeared, and the longer the case has been left untreated the longer will the treatment last. If the patient die, the mucous membrane of the colon will be found to be injected, red, or even livid; the submucous tissue is swollen; an excess of mucus can be seen on the surface; and there may, in an exceptionally severe case, be a few flakes of lymph or a few minute quite superficial ulcers.

2. *Membranous colitis.*—In this disease the patient passes from the rectum whitish membranous casts of the bowel. The subjects of it are mostly women over twenty years of age; they are anæmic, thin, complain of feeling cold, and suffer much from indigestion, often accompanied by some constipation. They are poor eaters, and the tongue is slightly covered with a white fur. Usually they are of a depressed melancholy turn of mind, and appear to get very little enjoyment out of life. This description applies in a well-marked case to the habitual state of health, but from time to time there are exacerbations during which all these symptoms become more severe, and in addition there is much griping pain in the abdomen, commonly in the course of the colon, and for the most part bearing no relation to food, and there may be nausea or even actual vomiting. After this state of things has gone on for a few days the patient begins to pass membranes and often blood from the bowel; this is not clotted, and has clearly come from low down. The membranes, which some patients call "skins" and others compare to pieces of tapeworm, are greyish or yellowish white, of sufficient consistency to remain intact when held up, and they vary from being very thin to about an eighth of an inch thick. A good specimen forms a complete cast of the colon, with perhaps some fæcal matter in its interior, and may be more than a foot long; but often only shreds, which are clearly fragments of larger pieces, are present, and these may have been rolled up into a tight ball by the movements of the colon. Under the microscope the membranes are seen to be structureless and somewhat transparent, with, embedded in them, a few minute pieces of undigested food, fæcal matter and some crystals, chiefly triple phosphate. Fatty epithelial cells may also be seen, clearly suggesting by their collection together and their arrangement that they are the cast-off cells of Lieberkühn's follicles; and the inner surface of the membrane is marked by a number of pits which correspond to the mouths of these follicles. Several leucocytes may also be seen. Chemically, these membranes are albuminous. The duration of an exacerbation during which membranes are passed may be only a few days, or they may continue to be passed for several years. Some motions contain fæcal matter, blood, and membrane; others contain only one or two of these three constituents. The fæcal matter is usually in the form of hard scybala, and constipation is more common than diarrhœa. I have seen one fatal case. No membranes had been passed for some time before death, and the colon was thin and marked with slight patches of congestion. Otherwise the whole body was normal. Treatment is very unsatisfactory. No drugs are known to have any certain effect for good. The body and mind must be maintained in the best general health possible. The patient should take plenty of outdoor exercise of such a nature as to occupy her mind as well as her body. Her diet should be abundant and simple, but at the same time carefully prepared, so as to tempt her to eat. Often the patient imagines she cannot eat this and that, and so she becomes very fastidious. A firm attempt to break this bad habit must be made. She should have some definite employment to occupy her mind, and when not at work should associate with cheerful companions rather than be left alone. Purgatives are particularly to be avoided. Every attempt must be made to get the bowels to act regularly, and the patient should go to the watercloset every morning whether or not she

[3] THE LANCET, Oct. 27th, 1894.
[1] THE LANCET, Dec. 15th, 1894, and Jan. 5th, 1895.

thinks the bowels will be moved. Her meals should be regular and she should go to bed early. If the pain or diarrhœa is at all severe she had better remain in bed, and some astringent—as bismuth—may be necessary. Opiates may be required for the pain, but they should be given sparingly, lest the patient become a confirmed opium or morphia taker, and all astringents should be ordered in small quantities because of the subsequent constipation. This is best overcome by a rectal injection of warm oil or glycerine. It has been suggested that in a very intractable case it might be justifiable to open the colon high up and, by allowing the fæces for some time to pass out through the artificial anus, to give it rest, and at the same time to flush it from the artificial opening to the natural anus with boracic acid lotion.

3. *Ulcerative colitis.*—This disease is about equally common in the two sexes, and the sufferers from it are usually between twenty and fifty years of age. It is ushered in by frequent attacks of pain, usually paroxysmal, severe, griping, and referred to the front of the abdomen. Between the attacks, of which there may be several in a day, there may be a slight dull pain, or even none at all. Severe diarrhœa is another early and constant symptom, and the bowels may be open five or six or more times a day. The act of defecation is accompanied by much abdominal pain, but marked tenesmus is rare. The motions are fluid, slimy, and foul smelling; usually some fluid blood—it may even be a large quantity—is present, and a few small lumps of fæces may be seen. Mucus is never present in large quantities. There may be some shreddy looking material, very like sloughs. For a day or two between the periods of diarrhœa there may be periods of constipation, during which more solid motions are passed. Many patients, before they have been admitted to the hospital, have suffered from vomiting, but this usually ceases under dieting and careful rest. The tongue is covered with a dirty whitish fur; as the disease progresses it becomes red and dry, with a brown fur. The patient has the pinched expression often seen in abdominal disease, he is extremely anæmic, his abdomen is somewhat distended, peristaltic movements may be visible, and ulceration may occasionally be felt per rectum. As the case goes on the anæmia and weakness progress, the patient looks extremely ill, and his pulse is feeble. Generally there is irregular pyrexia during the whole of an attack, the temperature commonly ranging between 100° and 102° F. The prognosis is extremely grave—in fact, we have no convincing evidence that the disease is recoverable. The duration is usually less than eight weeks; the commonest cause of death is exhaustion, but some patients succumb directly to perforation. In this country acute dysentery is so rare that there is not likely to be much confusion between it and ulcerative colitis. The different character of the stools and prominence of tenesmus, the burning pain within the anus, and the very frequent evacuation of the bowels in dysentery would help to establish the diagnosis. The diseases that I have known to be confounded with ulcerative colitis have been phthisis, malignant disease of the colon, intestinal obstruction, and pernicious anæmia. Post-mortem examination of many cases shows that in a typical example the muscular coat is exposed by ulceration, which is often so extensive that only islets of mucous membrane are left here and there. These are often considerably swollen, and consequently they look taller than they otherwise would, and frequently they are more or less sessile because of the ulceration that undermines them. The result is that a careless observer concludes that the colon is covered with polypi. The ulcers may be very numerous, and they may run together to form large, irregular ulcerated areas, with here and there perhaps a sloughy floor. The vessels are usually dilated; it is rare to see any attempt at healing. If the patient die early in the course of the disease the ulcers may be superficial and the mucous membrane very soft and congested. Sometimes the small intestine is affected as well as the colon, but to a less extent. Histologically the process is the same as is usually seen in chronic ulcerations. About half of the patients who die from ulcerative colitis show no disease except that of the intestine. The associated diseases which in any way suggest a special connexion are Bright's disease, gout, and hepatic abscess. Among twenty-three cases of ulcerative colitis of which I have notes of the condition of kidney, chronic interstitial nephritis was present in six, and of the remaining seventeen two had urate of soda in their joints. The association with suppuration of the liver is very rare, but probably there are two distinct varieties of it, as there are of hepatic abscesses in association with dysentery—namely, the small multiple pyæmic abscess and the large solitary abscess. Treatment, unfortunately, appears to have very little effect on the disease. Absolute rest in bed, with slop diet and opium, and hot fomentations if the pain and diarrhœa are very severe, probably afford the best chance, but the prognosis is exceedingly grave. Several cases will be found recorded in the Guy's Hospital Reports[2] and one showing the association with hepatic abscess in THE LANCET.[3]

Harley-street, W.

A REVIEW OF ONE HUNDRED ABDOMINAL SECTIONS.[1]

BY GEORGE ELDER, M.D. GLASG.,
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IT has seemed to me that the consideration of the results of my last 100 abdominal sections and comments would offer a sufficiently wide field for helpful criticism and discussion. They include all my operations of this class in the period from Feb. 23rd, 1893 to Nov. 17th, 1894, inclusive, and they are classified as follows:—

Operations.	No.	Results.	
		Recoveries.	Deaths.
Hysterectomy—			
Abdominal (for fibroids)	4	4	0
Vaginal (for cancer)	1	1	0
Ovariotomy—			
Single, 26 / Double, 5	31	29	2
Removal of the uterine appendages—			
(*a*) For inflammatory disease	33	32	1
(*b*) For uterine fibroids	4	4	0
(*c*) For tubal fœtation (unruptured)	1	1	0
Cholecystotomy	5	5	0
Incision and drainage in tuberculous peritonitis	2	2	0
Incision and drainage of intra-peritoneal perityphlitic abscess	1	1	0
Incision and drainage of (?) pancreatic cyst	1	0	1
Intestinal obstruction	2	0	2
Resection of bowel	1	1	0
Exploratory incisions	14	13	1
Total	100	93	7

Looking at the list of deaths it will be seen that two followed ovariotomy. The first occurred in a woman aged sixty-four years—a patient of Dr. Carnelley of Ruddington—very stout and much troubled with chronic bronchitis; in fact, she was suffering from it on admission to the hospital. For several days treatment directed to alter this condition was tried unavailingly, and it was decided finally to perform the operation with the hope that the removal of the tumour-pressure would have a beneficial effect. Unfortunately, death took place four days subsequently from capillary bronchitis, there being no evidence of peritoneal inflammation. The second death took place ten days after a very simple double ovariotomy in an otherwise healthy woman forty years of age from an insidious and slowly advancing form of septic peritonitis rarely seen, and bearing a very striking resemblance in character to typhoid fever. This case certainly ought not to have died. One more favourable for operation could hardly be obtained, and during the progress of the case, and some time after, the manner of infection was to me a puzzle, until casually I learned that the medical man who assisted me had just before seen a case of scarlet fever. Possibly my ideas on this subject may be very extreme, but personally for years I have declined to attend contagious febrile maladies, solely on the ground that in operative procedures involving life the interests of the patient should be paramount. The third death followed in a married woman aged twenty-six years—a patient of Mr. John Hynes of Nottingham. For several years she had, both at home and in various hospitals, been treated for recurrent pelvic inflammation, undoubtedly due to leakage

[2] Vol. xlv.
[3] THE LANCET, May 12th, 1894.
[1] A paper read at the Midland Branch of the British Medical Association, Grantham, on Nov. 29th, 1894.

from the pus tubes, until her health had become completely undermined. On abdominal section the tubes were found extensively and firmly adherent to intestine and broad ligaments, and their removal was a matter of extreme difficulty. Acute sepsis terminated the case forty-five hours after. Had I merely consulted my statistical record probably an examination of the difficulties of the case would have satisfied me, but the hopeless, dangerous condition into which the patient had drifted urged me to completely remove the diseased organs and give the woman the only chance she had of being restored to health. Whilst I think we ought not to operate on such cases too early—a mistake which can be nearly always avoided by a careful review of the history and symptoms of each case, assisted by a local examination—on the other hand, as is here well illustrated, the expectant treatment may be carried too far. The fourth fatality occurred in the person of an unmarried woman aged twenty-seven years, whom I first saw in consultation in June, 1893, with Mr. Walford of Stone Broom (to whom I am indebted for notes of the case, which I have to some extent used). This case is not only very unusual, but also instructive, and I may be pardoned in going somewhat into detail about it. The daughter of a publican, she had been credited for some time with pronounced alcoholic tendencies, and not, I think, without adequate grounds, although beyond occasional dyspeptic troubles her health had been good until Easter, 1893, when her fatal illness began. She then complained of pain on the left side of the abdomen, which suddenly took such an acute form on April 15th that Mr. Walford was sent for. The conditions then found were: distressing and foul vomiting, slight tenderness and resistance in the left iliac region, tongue clean and moist, pulse 150, thready, and temperature about 100° F. The bowels had acted the previous day, and the menstrual period was just over. The following are the notes taken at the time. "April 16th: Pain and sickness lessened. 19th: Temperature in the evening 102°; resistance in the left iliac region gone. 22nd to 28th: A slight improvement in the general condition, yet there is constant abdominal pain now in the left hypochondriac region, accompanied by a 'distended feeling.' Is very restless, and sleep can only be obtained by narcotics. For fourteen days no properly formed motion was passed, but simply bile-stained mucus. Pulse rate lowered to 130 beats, irregular. Towards the end of this period a resistant mass, dull on percussion and tender, was noticed below the margin of the left ribs at a point about the junction of the hypochondriac and epigastric regions, and this slowly extended downwards to the right side. May 8th: As the patient was getting much worse Dr. Handford saw her in consultation, and thought the case possibly one of cystic tumour in the neighbourhood of the pancreas. May 16th: The tumour has kept steadily growing, especially towards the right side, its upper border being lost under the ribs; bulging is very noticeable. During the whole of the illness sickness had been almost constant, no natural sleep being obtained nor any proper evacuation of the bowels." The local conditions at my visit were as follows: a prominent abdominal tumour could be seen and felt, extending from two inches and a half above the right nipple to within a hand's breadth of the iliac crest, only slightly encroaching upon the left hypochonder; dull to percussion, the dulness being continuous with that of the liver, and elastic. As it was obvious that an operation offered the patient her only chance, it was advised and carried out on June 8th. An incision being made above the most prominent part of the growth, and the peritoneal cavity opened, the stomach was found to be flattened out and adherent to the upper part of its surface; and, lower down, the omentum, much thickened with inflammatory exudate, adhered firmly to the parietal peritoneum and its inferior margin. On peeling this off the cyst lay exposed intimately connected with the colon and deeper parts, so that its precise origin could not be made out, nor was it deemed advisable to attempt its enucleation. From four to five pints of greenish-black or brownish liquid containing a few flocculi were removed by aspiration, and the cyst opening after irrigation was stitched to the parietes and a drainage-tube inserted. As some of the fluid had got into the peritoneal cavity a second (glass) tube was left in Douglas's pouch. The patient rallied well from the operation and seemed to be going on favourably until eighteen hours later, when suddenly she became cold, pulseless, and gasping for breath, dying in a few minutes. No necropsy was allowed, but, looking back at the history of her eight weeks' illness from the light thrown upon the case by the operation, there seems to be little doubt but that it was an example of pancreatic cyst. The fifth and sixth deaths occurred after operations for the relief of intestinal obstruction. The first was that of a woman aged thirty-two years, who had been in ill-health since a miscarriage two years and a half before, and had gone to Matlock for change. Her chief symptoms had been frequently recurring attacks of "spasms" and obstinate constipation. On the evening of her arrival, after a journey of 130 miles, she was suddenly seized with abdominal pains, and early next morning Mr. Moxon was called in, and was able by hot applications and hypodermic injections of morphia to control the symptoms. Neither now nor subsequently was the vomit feculent. On the following day evidence of general peritonitis showed itself, and when I saw her with Mr. Moxon on the fourth day the abdomen was uniformly distended, tympanitic, and slightly tender, particularly high up on the left side. No cause of the trouble could be made out, although a careful examination of the usual seats of hernia, pelvic organs, and the lower bowel was made, and as it was evident that the patient's condition was becoming more serious, an operation was advised, and done on the following morning. On opening the peritoneal cavity a considerable quantity of serous fluid welled out, and it was noted how intensely congested the presenting parts were, especially about the cæcum and vermiform appendix, the latter, although somewhat thickened, being quite intact and containing no concretion. Neither by manipulation of the abdominal contents whilst *in situ* nor by touch could anything beyond the peritonitis be discovered, so it was decided to close the wound in the usual manner, providing for drainage. For three days the patient lived—neither the better nor the worse, in my opinion—for the operation. The distension day by day slightly increased, mainly in the upper half of the abdomen, although several times flatus was passed in large quantities after turpentine enemata; but, do what we would, no satisfactory evacuation of the bowels could be obtained. The other case of intestinal obstruction was due to volvulus of the large bowel in a boy aged seventeen years, whom I saw five days after the seizure with Mr. Howson of Sneinton. He then had general peritonitis, and on opening the abdominal cavity the twisted portion quickly came into view, and was without difficulty rectified. The bowel was intensely congested, showing here and there patches of reddish-black discolouration; but in the hope that it would recover itself the bowel was returned, and the operation finished in the usual way. It would probably have been better surgery to have either made an artificial anus or attached the damaged bowel to the parietes and waited for further developments, but the result in this case, probably, would have been the same, as the boy never thoroughly recovered from the shock and died some nine hours afterwards. As is well known, such cases as the above are not very hopeful subjects for operation, partly owing to the uncertainty of their initial lesion, and also to the lateness as a rule at which surgical aid is called in. What the starting-point in the first case was it is impossible now to say, but it seems to me not unlikely that there was a slowly invading stricture of the small bowel which suddenly became occluded. This would account not only for the long illness the patient previously had, in which "spasms" and obstinate constipation were prominent symptoms, but also for the sequent train of events. The second case, as was to be expected from its nature, ran a more acute course. The last death in the series was operated upon by me in conjunction with Mr. A. E Lyster of Long Eaton. The woman, aged forty years, had been bedridden for months with a pelvic growth, which when I saw her was accompanied by a large amount of ascites. Although there could be little doubt about the malignancy of the case the friends were anxious that an exploratory incision should be made, which was done, confirming our diagnosis. The woman died a few days afterwards, and the worst that the operation did for her was merely to antedate the events by a few days.

Singularly enough, six deaths happened in the first fifteen cases, so that there has only been one in the last eighty-five, viz., that occurring on March 13th this year, after the operation for volvulus. Amongst the thirty-one ovarian cystomata there were one dermoid, two papillomata (one suppurating), and two with twisted pedicles. As to age, three patients were sixty-four and one sixty-five years, one of the former, a patient of Dr. Macdonald of Crich, having a somewhat rare experience, inasmuch as she had removed by me

a large right multilocular tumour, and twelve years before Dr. Granville Bantock, at the Samaritan Hospital, London, removed one from the other side.

One of the most instructive cases of the series was that of a woman aged forty years, an inmate of the Belper Workhouse, sent to me by Mr. Allen. She had been tapped fourteen times for ascites, the last within a fortnight of her admission into hospital last April. So quickly had reaccumulation taken place that then her abdomen was much distended, and through the fluid could be felt, at the lower third of the abdomen, a fixed resistant mass, which per vaginam could be felt filling up the pelvic cavity. It was decided to open the abdomen, when the papillomatous nature of the growth revealed itself; and at first, on account of its adhesions, it was thought to be quite impossible to enucleate it, but ultimately this was done and an elastic ligature thrown round its base to control the very free hæmorrhage. The growth was then cut off, when it was found that what had seemed one homogeneous mass was in reality two growths springing from both ovaries which had met in the middle and overlapped the uterus. The stump was therefore disinfected, as in an ordinary hysterectomy, and treated extra-peritoneally, with the result that the patient made a very good recovery and has remained in perfect health ever since.[4] In treating the pedicle in the four supra-vaginal hysterectomies for fibroids the intra-peritoneal method was used in one case, and tying off the arterial supply and fixing the stump to the parietes, or what is known as the "mixed method," in the other three.

In the matter of the removal of the uterine appendages for inflammatory disease no operation was performed without ample justification in the clinical symptoms and local conditions of the case, supplemented, when necessary, by an examination under an anæsthetic, and also acquainting those concerned with the immediate and remote effects of the operation. Now one word as to the place of exploratory incisions in this branch of surgery. No hard-and-fast line can be laid down in this matter, inasmuch as what would be rash because dangerous in the hands of one surgeon is in the hands of another a safe and reasonable evolution of diagnostic methods. In saying this I am far from wishing to underrate the gravity of the procedure, but, whilst granting this, it seems to me that when we have exhausted all other available aids to diagnosis, and either completely or in some material point failed, or when with a full knowledge of the pathology of the case there is a doubt as to its operable character, then we are perfectly justified, after stating the nature and limits of the proposed operation, in counselling those concerned to run the very slight risk which is involved. I need hardly say that at such a time one ought to be prepared to undertake whatever operation the exigencies of the case demands, so that no one should perform an exploratory operation without being perfectly familiar with the technique of abdominal surgery.

Nottingham.

ON CYCLING AS A CAUSE OF HEART DISEASE.

BY GEORGE HERSCHELL, M.D. LOND.,

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An Abstract of a Paper communicated to the Eighth International Congress of Hygiene and Demography, Budapest, 1894.

THE chief danger of cycling, or rather the reason why it may become more injurious than some other forms of exercise, is the fact that a cyclist takes much more exercise than he is aware of, and is very frequently tempted to overtax his powers. He starts off in the morning for a ride fresh and vigorous, having previously mapped out his course; but when the time arrives for his midday meal he may have some few miles yet to go. He has perhaps over-rated his capacity; or the condition of the roads renders it impossible to travel at the rate upon which he had based his calculations. But he is hungry, and so he redoubles his efforts to reach his destination and when he arrives there he is utterly fagged out and has lost his appetite. As an example of the facility with which one may be lead into taking more exertion than one has counted upon I may relate a case which came under my notice a few weeks ago. A gentleman who had not ridden for some time started out one morning for a run into the country, neglecting to take any lamp. When he arrived at his destination it came on to rain, and the friends whom he was visiting prevailed upon him to stay until late in the evening. At half-past seven he found himself still fifteen miles from home, and on that particular evening police regulations compelled the lamps to be lighted at a quarter past eight. It was now a race against time, but he succeeded in reaching home only a few minutes after that hour. I saw him at nine o'clock. His pulse was then 125, and he complained of thirst, restlessness, and a feeling of oppression at the chest. At 9.15 his pulse was 120. At ten it was 110. At eleven o'clock it had sunk to 100. He then retired to bed, but passed a sleepless night. On rising in the morning his pulse was 90, and it did not reach the normal 68 until the day after. The commonest way, however, in which the cyclist injures himself is in climbing hills. He is nearing the top of the hill, and the heart is dilated with the strain put upon it by the increased arterial tension. If the rider were now to stop and recover himself no harm would be done. But in too many cases he sees that only a few more revolutions of the wheel will be required to carry him to the top. So he redoubles his exertions, putting further strain upon a heart already taxed to the utmost limit of its capacity, and in those few moments damage has been done to the heart from which it perhaps cannot recover.

I believe that it is usual at the commencement of a club run for the riders to agree that they will adapt their pace to the slowest member. That is all very well in theory, but what really takes place is that after a time one of the faster riders unconsciously quickens his pace. The rest of the club follow suit, and before very long they are all travelling at a rate which is far beyond the capacity of a certain proportion of the set. To be unable to keep up with the rest of the club is a confession of effeminacy, and it would be morally impossible to get off your machine and walk up a hill which your friends are riding up. Another circumstance which increases the deadliness of the modern cycle is the fact that it is nowadays considered a point of honour, especially among novices, to ride with as high a gear as possible. It is, I am sure, no exaggeration to say that 90 per cent. of all riders are using a gear much too high for their strength. For the benefit of those who are not practical cyclists I will here explain what is meant by "gear." In the early days of cycling the pedals were attached directly to the axis of the driving wheel. The effect of this was that the largest wheel which could be used was determined by the length of the legs of the rider. And since the distance which a machine would travel with one revolution of the pedals depended upon the size of the wheel, tall men were at a great advantage over short ones when it came to racing. So every one rode as large a wheel as he could, and strictured urethra from perineal pressure was common. The introduction of geared machines altered all this. The pedals, instead of being attached to the hub of the driving wheel, communicate motion to a cog-wheel, and this in its turn, by means of a chain or other mechanical device, rotates another wheel rigidly fastened to the hub of the driving wheel. By varying the sizes of the respective wheels the driving wheel can be caused to rotate a greater number of times than the pedals. If, therefore, a driving wheel of thirty inches in diameter were caused to rotate twice for every once that the pedals went round, you would be securing all the advantage of a sixty-inch wheel as regards speed with half the weight. Of course the more a machine is geared up the harder work it is to push it. That is what is meant by a high gear. Machines for racing are geared up to seventy inches or more. Boys of fifteen or sixteen years of age boast that they ride machines geared up to sixty-three inches, whereas a fifty-six inch gear would be much more suitable for them.

The subject-matter of this paper is intended to apply to the thousands of every-day cyclists. I am not taking into consideration the path and road racers. These men are deliberately sacrificing their future health for the sake of winning a few prizes. What shall we say to 460 miles ridden in twenty-four hours at Herne Hill last year? At this race some of the men rode until they dropped off their machines. Another very reprehensible thing is what is known as a "hill-climbing contest." Everything that I have said with regard to riding up hills applies here with double force. Hills of the steepest gradient are purposely

[4] Feb. 28th, 1895: This patient still keeps well, having had no recurrence.

selected, and the competitors ride up them against time, trying to break existing records for that particular hill. Nothing more suicidal or more certain to produce heart disease can possibly be imagined.

The effects upon the heart of the strain of excessive cycling may be divided into four groups:—1. Simple hypertrophy of the heart. 2. Acute dilatation of the heart, ending either in recovery if the cause be removed or in death if it persists. 3 Chronic valvular disease of the heart. 4. Functional derangement of the heart.

GROUP 1.—SIMPLE HYPERTROPHY OF THE HEART.

This is apt to occur in well-trained riders who do a great deal of cycling, and may be looked upon as a compensatory effort of nature to enable the work to be performed. Cycling for extended periods of time at a great pace, like other forms of prolonged muscular exertion, enormously increases the blood pressure in the arteries. Hypertrophy of the heart follows the law which governs all muscles—that increased work is followed by increased growth if the nutrition is kept up. Moderate degrees of hypertrophy are quite compatible with health, and are usually unattended with symptoms. The danger, however, is in the ultimate effects which are liable to ensue. The heightened blood pressure in the arteries gradually produces a hard inelastic condition of their walls, which perpetuates and increases the hypertrophy. Moreover, these altered arteries are prone sooner or later to undergo degenerative changes, and, having lost their normal elasticity, to give way on some occasion of sudden strain. As a rule, the athlete enjoys vigorous health for the few years during which he is actively working, and his heart is only enlarged enough to meet the constant demands upon it; but when the cyclist, no longer in his first youth and unable to compete with younger men, relaxes his efforts, his heart is now too large for the work it is required to do, and the symptoms of hypertrophy soon make themselves felt. Hypertrophy following over-exertion may disappear under proper treatment if taken early and the cause removed, but when it has persisted for a number of years this is rarely, if ever, possible, and ulterior changes are apt to ensue. It is well known that athletes are liable to rapid deterioration of health when they relinquish their active exercises. It is also probable that a hypertrophied heart may undergo degenerative changes whilst in active daily work. This is rendered probable by what is known to happen in the case of file-cutters, whose work consists in quickly flexing their biceps. The effect of this is to cause hypertrophy of that muscle, but after a few years it atrophies. This is so certainly known in the trade that file-cutters receive very high wages, based upon the probable working life of their hypertrophied biceps. It is possible that in this way we may have an explanation of the well-known fact that compensatory hypertrophy of the heart cannot be preserved indefinitely, although the valve lesion may be stationary. Hypertrophy of the heart produced by cycling may terminate in one of these ways: (1) recovery; (2) valvular disease and disease of the aorta; (3) degeneration of the heart muscle.

GROUP 2.—ACUTE DILATATION OF THE HEART.

Until the individual first shows signs of being "out of breath" both ventricles are sending equal quantities of blood into the pulmonic and aortic systems respectively in equal periods of time. At each beat the left heart is withdrawing from the lungs exactly the same quantity of blood that has been forced into them by the right heart. And it is evident that the oxygen supplied to the blood is exactly equal to what the body requires. Respiration and the heart's action, although hurried by the exercise, are carried on normally and without unpleasant sensations. If, however, the exercise be continued, the heart is stimulated to contract at such a rate that the respiratory muscles cannot keep pace with it. Besides, the time during which it is possible for the blood to come into contact with the oxygen in the lungs is shortened. "Shortness of breath" is thus produced, the sensation being, as we all know, the cry of the blood for more oxygen. Accompanying this will be obstruction to the circulation through the lungs, and a small abnormal amount of residual blood will remain in the right ventricle. If the extreme muscular efforts are continued the excess of venous blood in the pulmonary vessels will increase with every beat and the right heart will rapidly dilate. At this stage the quantities of blood thrown out from the two ventricles are unequal. The heart continues beating and expelling the whole of its contents with the exception of the residual blood in the right ventricle. At last a moment comes when from fatigue the muscles at the base of the ventricles are no longer able to adapt the ring to which the bases of the valves are attached so that the valves will efficiently close them. And since the whole of the valvular ring is expanded while the valves have retained their former size regurgitation must take place. If at this point the individual ceases his muscular efforts, in all probability the heart will quickly recover itself; but if the recovery is not complete there may remain permanent incompetence of the tricuspid valve. On the other hand, if the exertion is kept up, the heart, being unable to pass on the whole quantity of blood that reaches it at each beat, undergoes rapid dilatation of the right ventricle and death by asystole is the result. Of such a character doubtless are the cases of sudden heart failure which has occasionally caused the death of riders even in the course of a journey. The following fatal case of acute overstraining of the heart occasioned by cycling came under my notice in 1884, and the notes may be of interest as showing the symptoms which may be expected. A man aged forty-six years had lately taken to cycling and used a heavy tricycle. After having followed the sport for three weeks and made some short journeys he attempted to ride from Brighton, where he resided, to London, a distance of fifty-three miles. I was called to see him about seven o'clock in the evening at his hotel and found him cyanosed and very exhausted. There was intense dyspnœa, and his pulse was 144 per minute and very feeble. His heart's action was irregular and weak. Dulness extended transversely from a quarter of an inch outside the right parasternal line to the left mammary line. The apex was beating in the sixth intercostal space in the left mammary line. A systolic bruit was apparent both over the mitral and tricuspid areas, and there was pulsation in the veins of the neck. The urine contained a trace of albumen. Unfortunately, in spite of treatment, he gradually sank, and died early next morning. I was informed that the patient had never previously exhibited any symptoms which pointed to heart disease. The absence of marked hypertrophy of the heart would also negative the supposition. No post-mortem examination could be obtained. The case was evidently one of acute dilatation of the heart in a man not so young as to be able to undertake with impunity such a muscular task as a ride of fifty-three miles against time. The overstrained and distended heart was unable to contract vigorously enough to restore the equilibrium, and fatal syncope was the result. Acute dilatation of the heart produced by cycling, then, may terminate either—(1) in recovery; or (2) in the production of valvular disease.

GROUP 3.—CHRONIC VALVULAR DISEASE OF THE HEART.

I believe that the mechanism by which permanent valvular disease of the heart is produced by overstrain from exercises such as cycling is twofold: 1. As a sequel to acute dilatation of the heart. The ring to which the bases of the auriculo-ventricular valves are attached having been once stretched sufficiently to allow regurgitation to take place does not recover itself, but remains permanently enlarged. We shall thus have regurgitation into the auricle. The case will then pass through the usual stages of compensatory hypertrophy, with probably final breaking down of compensation. 2. As a result of hypertrophy. It is probable that the constant high tension in the arterial system with the resulting strain upon the valves occasions slight injuries to their surface with the subsequent production of sclerotic changes. In cases which have come under my notice I have found that the great majority suffered from lesions of the aortic valves, and I have reason to believe that the hypertrophy always ante-dated the valve mischief. This is only what we might expect. The aorta, unlike the heart, cannot strengthen itself against an excessive strain, as its activity is practically nothing more than the recoil of elastic tissue. Strain of such a structure will cause chronic endarteritis and loss of elasticity. If you examine such an artery with a microscope you will find small points of endarteritis upon the inner coat and patches of diffuse granular exudation in the middle one. The next step will be dilatation or pouching of the aorta just above the valves which are as yet competent. Many cases come under observation in this condition, and the following may be taken as a typical example. A man thirty-one years of age attended my out-patient department at the hospital in the autumn of 1892. He complained of palpitation and shortness of breath. During the summer he had been constantly riding the bicycle, going on an average sixty miles a day for three days a week. On examination there was evident hypertrophy of the heart, the apex beating

in the anterior axillary line. The right margin of cardiac dulness was half an inch to the right of the sternum. The arterial dulness over the upper edges of the sternum was decidedly wider than it should be, pointing to dilatation of the aorta. There were no bruits and no thrills, but there was marked accentuation of the aortic second sound. This would probably be the first stage in the production of valvular disease. As regards the further course of such a case we have three possibilities: (1) the aortic ring may be stretched by the pouching of the aorta and regurgitation may take place; (2) a valve may actually give way; (3) sclerotic changes may take place in the valves. In any of these cases the disease will follow the usual course of valvular mischief produced by other causes.

GROUP 4.—FUNCTIONAL DERANGEMENT OF THE HEART.

I believe that this condition as the result of cycling is much more common than is generally supposed. Many cases are but slight and quickly recover, so that they are overlooked or ascribed to other causes. Da Costa applied the term "irritable heart" to chronic cases of tachycardia which he observed amongst the men engaged in the American Civil War. This condition resembled in many respects the functional affections of the heart which we see as the result of strain when cycling. It is extremely probable that they are identical as regards pathology. I believe that these conditions always follow a temporary dilatation of the heart in the following manner. As we have shown, right-sided dilatation of the heart is invariably produced by the prolonged strain of too rapid cycling. This dilatation having subsided when the cause has ceased to operate, the heart remains irritable from the stretching that its muscular fibres have undergone. It would seem in these cases almost as if the inhibitory function of the pneumogastric nerve were suspended, for when the heart has so far recovered itself from the immediate effects of the strain that the pulse-rate has fallen to normal any slight exertion or emotion will bring the palpitation on again. The symptoms which I have observed in these cases have been chiefly the following.

Palpitation of the heart.—This is very distressing, and usually occurs on the slightest exertion or emotion. If not relieved by appropriate treatment it may possibly end in the permanent establishment of a "rapid heart." Dr. Bristowe has narrated a case in which paroxysms of extreme rapidity of the heart's action were probably initiated in a boy eight years of age from physical exertion in a paperchase. This ultimately became a case of confirmed "rapid heart," and ended in sudden death at the age of nineteen years.

Shortness of breath.—This usually accompanies the palpitation and comes on when the patient exerts himself even in a slight degree.

Sensation of sinking at the epigastrium.—In certain of my cases this has been one of the most prominent symptoms.

Subjective sensations in the region of the heart.—The patient is conscious of the heart's action, and often feels as if it were going to stop.

Intermittency of the heart's action.—I believe that I have traced the origin of this condition in several cases to a temporary dilatation of the heart as the result of hill-climbing.

Anginoid symptoms.—Two of my cases complained chiefly of pain in the cardiac region, coming on in paroxysms, running down the left arm, and accompanied by a sense of suffocation and impending death. They both completely recovered under appropriate treatment.

These, then, are some of the possible evils of excessive cycling. On the other hand, we have the undoubted fact that in moderation and under proper conditions it is one of the most health-giving forms of exercise. In established heart disease, strange as it may seem, it is one of our most potent remedial measures. Commencing with the lowest gearing for the shortest periods and along level roads, carefully graduated cycling is able to establish that compensatory hypertrophy which alone can enable the victims of valvular disease of the heart to live in comfort and usefulness. For this purpose I prescribe it largely.

Let us now turn to preventive measures and consider some precautions against the dangers of this fascinating sport. I would lay stress upon the following points:—

1. *The use of a low gear.*—This has been already described.

2. *The upright position in riding.*—The stooping posture, so habitual to the modern cyclist, by contracting the chest prevents the proper expansion of the lungs, and by interfering with the aeration of the blood causes the condition of breathlessness to come on quicker.

3. *Adequate food when riding, and the avoidance of muscle poisons such as beef-tea.*—A badly nourished muscle gives way sooner than one which is well fed. As I have pointed out in a previous paper, it is probable that the digestive power of the stomach is inhibited during riding. From this it follows that the ordinary food taken by the cyclist on the track or road is not digested, and does not provide him with energy. In the paper alluded to I advocated the use of peptonised gruel or soup.

4. *The cyclist must avoid preparations of kola and coca.*—These by numbing the sense of weariness enable injuriously excessive work to be done almost without the knowledge of the rider.

5. *On no account should the cyclist continue riding after he has commenced to feel short of breath, or when there is the slightest sensation of uneasiness in the chest.*—This simple precaution is one which cannot be too earnestly recommended.

Queen Anne-street, W.

SUCCESSFUL OVARIOTOMY ON A PATIENT IN HER EIGHTY-SEVENTH YEAR

UPON WHOM OVARIOTOMY HAD ALSO BEEN PERFORMED WHEN SHE WAS NEARLY EIGHTY YEARS OF AGE.

BY E. MATTHEWS OWENS, L.R.C.P. EDIN., M.R.C.S. ENG.

MANY of the readers of THE LANCET who are interested in gynæcological matters will perhaps remember that a case was recorded by Mr. Lawson Tait at a meeting of the Gynæcological Society in 1888 of a patient seventy-nine years and ten months who had been successfully operated upon by me for a large parovarian cyst by abdominal section. The case remained for some time as the oldest on record; but as time went on it was exceeded. Dr. Herbert Spencer[1] records one in a patient eighty-two years and two months old. Also there is one by Mr. Bush[2] in a patient in her eighty-fifth year. But any case in a patient over eighty years of age must still be considered as worth recording; otherwise Dr. Heywood Smith would not publish one in a patient eighty-one years of age.[3] Hence it is that I feel rather proud in being able to put on record a successful ovariotomy in a patient in her eighty-seventh year.

A married woman who had been operated upon by me in December, 1887, being then aged seventy-nine years and ten months, remained quite well until the middle of 1893, when she noticed that her abdomen was swelling. It gradually increased until it prevented her from taking exercise. I was asked to see her in February, 1894, and diagnosed a fibro-cystic tumour of the ovary, evidently growing rapidly. From the history given me I am afraid I rather ridiculed any operative interference; but not so the patient, for when she distinctly understood that it was an ovarian tumour she called her family together, they acting as jury and she as judge, and the verdict being "that as her life had become a burden through the size of the tumour, and she had survived one operation, therefore she saw no reason why she should not survive a second." I was sent for, told the decision, and requested to operate as soon as possible, she and her friends accepting all responsibility. Under the circumstances I thought it well not to lose any time, so three days after the decision was arrived at—viz., on May 3rd, 1894 (that is, six years and three months since she had been previously operated upon, her age being thus exactly eighty-six years and one month)—I operated at her own house, Dr. Lilian Cooper giving chloroform. The operation was quite simple, but as in 1887 the parovarian cyst had been removed from the left side it was a fair deduction to make that the present tumour would arise from the right side. Therefore I made my incision to the right side of the 1887 one, but on opening the peritoneum I had to my astonishment to get over to the left side to reach the pedicle of the tumour, which proved to be, as diagnosed, fibro-cystic. The patient made an excellent recovery, without a bad symptom as

[1] Brit. Med. Jour., Dec. 9th, 1893.
[2] Ibid., July 14th, 1894.
[3] THE LANCET, June 30th, 1894.

regards the operation, but some cystitis appeared, caused, I think, by over-anxiety of the nurse, who in order to make sure of destroying all septic germs soaked the catheter in too strong a solution of carbolic acid, which so softened the instrument that, I think, some bits of its covering were left adhering to the mucous membrane of the bladder. Perhaps also the mode of feeding aggravated matters; but I dared not and did not alter it, and with suitable treatment all cystitis gradually subsided. I need hardly say that it was not a case in which to rigidly adhere to gruel and sips of tepid or iced water. Instead, directly the operation was over, I commenced with nutrient enemata every two or three hours, and after twelve hours prepared essence of beef, brandy, zyminised milk, &c., were given by mouth. Until she was convalescent I am afraid to say how much brandy, coca wine, and essence of beef she consumed; but it was a very large quantity. On one thing I was determined — namely, that if she died it should not be from exhaustion. There is also another part of treatment that was carried out in this case which I think I may pronounce as being of immense benefit—viz., hypodermic injections of sulphuric ether, not only during the operation, but also during convalescence. The nurse's instructions were to give the injections whenever she thought that the patient looked, or expressed herself as feeling, exhausted, even if she had had stimulants by the mouth only a short time previously. Exhaustion was to mean hypodermic injection at once. I must say that this treatment acted splendidly. She is now (Aug. 24th, 1894) in most robust health, driving, and walking, and looks as if she would live to be a hundred years of age.

Remarks.—The interest of this case lies not only in the extreme age of the patient, but also in that it clears up a doubtful fact, for it is proved to be quite possible to have a parovarian cyst removed and subsequently for a true ovarian cyst to be developed on the same side; and this opens up an important point—viz., whether it is good surgery to simply shell out a parovarian cyst, leaving the appendages, or whether it is not better to remove everything on that side. Had I done this in 1887 I should not now be in the position, for the time being, of holding the honour of having performed successful ovariotomy in a patient of the most advanced age.

Brisbane, Queensland.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CURIOUS CASE OF CARBOLIC ACID POISONING.

BY W. H. BROWN, F.R.C.S. IREL.

A FEW days ago I was asked to see, in consultation with a medical man, a child three years of age. An hour prior to my visit an attendant had been directed to clean the child's head with carbolic oil. After she had been rubbing it for three minutes she discovered that in place of carbolic oil she had used pure carbolic acid. So soon as the mistake was noticed the head was promptly washed, but within five minutes the child lost consciousness. When an hour later I saw the child it was deeply comatose, in which condition it remained for five hours, when two ounces of olive-green-coloured urine were passed. The return to consciousness was very gradual, the child having for several hours a dazed appearance. At the end of three days the urine became normal, and the albumen, of which there had been a trace, disappeared. Seeing the frequency with which carbolic acid is used, I thought it right to mention this instance of its rapid absorption by the unbroken skin.

Leeds.

CALCULUS PASSED BY THE FEMALE URETHRA.

BY J. GORDON SHARP, M.B., C.M. EDIN.,
LATE RESEARCH STUDENT IN PHARMACOLOGY, OWENS COLLEGE, VICTORIA UNIVERSITY, MANCHESTER.

SUBSEQUENTLY to attacks of renal colic a woman between forty and fifty years of age passes calculi of a rich puce colour. The pigment is due to an *organic compound of iron*, and an account of their physiological chemistry has been published by me.[1] Hitherto the stones passed have been small, with a few large ones weighing from five to six grains; but recently the woman passed a stone the length of which is $\frac{3}{8}$ in., and the circumference at the greatest part is $\frac{1}{2}$ in. The weight is exactly ten grains. Like all the others passed, this calculus is intensely hard, and it is highly polished and smooth. The wonder is that such a large stone could be passed with so little constitutional disturbance, for after she has had an attack of colic she enjoys fairly good health. For some three years the patient has, at intervals of four or five months, or occasionally longer, passed a number of stones of the character indicated, and, although none of them have been so large in circumference as the one described, still they are sufficiently large to occasion some surprise that they should have been voided with comparatively so little trouble.

Leeds.

AN UNUSUAL FORM OF HYMEN.

BY C. E. PURSLOW, M.D. LOND.,
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THE patient, aged fifty-seven, unmarried, was admitted to the Queen's Hospital, Birmingham, on Jan. 3rd, 1895. Menstruation had never ceased, and as the hymen would not admit the finger it was considered advisable to examine thoroughly under chloroform. When she was anæsthetised it was seen that the hymen presented two separate, small rounded apertures, each just admitting the uterine sound. The finger was passed forcibly, and two small polypi were found to be protruding through the cervix; these were removed. The point of interest about the case is that the hymen approached to that variety described in the text-books as cribriform, and although almost all the text-books agree in stating that such a form of hymen may be found recent investigators have denied that any such condition of hymen ever does exist.

Birmingham.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

AN EXCEPTIONAL CASE OF EPITHELIOMA OF THE TONGUE IN A WOMAN; REMOVAL; RECURRENCE; DEATH IN TEN MONTHS.

(Under the care of Mr. WARRINGTON HAWARD.)

ALTHOUGH epithelioma of the tongue rarely attacks females, occasional cases such as the following remind us that they are not quite exempt from it and that it does sometimes occur in them; according to Mr. A. E. Barker this is in the proportion of 247 males to 46 females. This is probably above the average for true cancers. From the statistical reports of St. Thomas's Hospital for the years 1881–93 inclusive we learn that there were 160 cases of epithelioma of the tongue under treatment, of which number only sixteen patients were women. Cancer of any part of the body is rare at the age of this patient; it sometimes commences in the cervix uteri at even an earlier date, but is scarcely ever seen in the tongue. Gurlt, who collected statistics of 11,131 cases of cancer, found that in 4769 in which the age of the patients was recorded, only 0·4 per cent. recovered under the age of twenty. We are inclined to the opinion that when epithelioma affects the tongue in women a larger proportion of the cases will be found to be under the age of thirty than obtains in the other sex. This case

[1] Journal of Anatomy and Physiology, July, 1894.

illustrates the statement in one of our text-books on surgery very vividly:[1] "The age of the patient exerts a considerable influence on the growth and malignancy of the tumour. As a rule, the younger the patient the more rapidly does the tumour grow, the earlier does it affect the lymphatic glands, and the more widely disseminated are the secondary growths." For the notes of this case we are indebted to Mr. Arthur H. Ward, surgical registrar.

The patient was admitted into St. George's Hospital on Jan. 5th, 1894, under the care of Mr. Warrington Haward. She was a healthy looking woman, aged twenty-three years, with no history of tubercle or syphilis. Six weeks before admission she noticed a slight soreness and swelling on the right margin of the tongue. Carious molar stumps were removed from the right lower jaw about four weeks later. She had worn a tooth-plate on the upper jaw for two years. On her admission there was found to be an oval infiltrated area of the size of a shilling, which was situated far back on the right margin of the tongue. The surface was whitish, irregular, and raised. No glands could be felt in the submaxillary region. The dorsum of the tongue was normal. No signs of syphilis or tubercle were present. Carious stumps were removed from the right upper jaw, and iodide of potassium was given in ten-grain doses three times a day. Calomel was applied locally. A fortnight later a nodule the size of a split pea was found on the dorsum of the tongue, about half an inch from the original ulcer. A consultation was held, and the growth diagnosed as epithelioma. A small portion was removed and microscopically examined; it was a squamous-celled epithelioma. The right half of the tongue was then removed by the chain écraseur. In a fortnight an enlarged gland was felt near the angle of the jaw. The patient was sent to the convalescent hospital at Wimbledon for three weeks and then went home to the country. The cervical glands were then enlarging. Dr. Livingston reported that the growth recurred both in the scar and in the right tonsil. The mouth could not be opened. The cervical glands suppurated, and the patient became very anæmic. She died exhausted ten months after the operation, and just over a year since the first appearance of the disease.

SUSSEX COUNTY HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER TREATED BY LAPAROTOMY; RECOVERY; REMARKS.

(Under the care of Mr. R. F. JOWERS.)

WE give with the account of his successful treatment of perforation of a gastric ulcer a table contributed by Mr. Jowers of published cases of operation for similar perforations, which will be useful for reference. There were several circumstances in his favour, as is pointed out by him in his remarks, but without the promptitude and skill in overcoming difficulties inherent in the case which the surgeon manifested a fatal termination must have ensued. In a paper recently read before the British Medical Association Mr. Gould made some remarks about the position of gastric ulcers, to which we refer. He said: "Only 2 per cent. of the ulcers on the posterior surface of the stomach perforate, and only very rarely is this perforation into the general peritoneal cavity; more commonly the ulceration extends into the pancreas and gives rise to abscess beneath the diaphragm, and often, also, to suppuration in the pleura and base of the lung, especially on the left side. Of the less frequent ulcers on the anterior wall of the stomach as many as 85 per cent. perforate, and most often into the general peritoneal cavity," &c. It is becoming more fully understood that without operation in cases of perforation of gastric ulcer death will ensue, and that speedily. When operation has been performed the result has been satisfactory, and about 35 per cent. of the patients have been saved. It is the physician who must recognise when surgical interference alone can afford safety, and it was owing to the rapid diagnosis and action of Dr. Gordon Dill that the surgeon was in this case enabled to operate under unusually favourable circumstances.

An anæmic-looking woman aged twenty-four years was admitted to the Sussex County Hospital on the evening of Sept. 5th, 1894. She had for two years suffered pain after food, and five weeks previously she had been sick three or four times, but never brought up blood. The sickness induced her to seek advice at a London hospital, to which she was admitted and was told that she had gastric ulcer. She was kept in bed and placed upon milk diet, but for the last week of her stay there had been taking chicken and fish without pain. She left the hospital and went to Brighton on Sept. 5th. About 7 P.M. the same evening she drank a large cupful of cocoa and shortly afterwards, whilst walking, was seized with violent pain in the abdomen and vomited. She managed to get into a cab and was taken home. About 10 P.M. she was seen by Dr. Gordon Dill, who having diagnosed a perforated gastric ulcer ordered her immediately to the Sussex County Hospital, where she arrived soon after twelve o'clock. On being summoned to the hospital Mr. Jowers found the patient cold and collapsed, the face drawn, the pupils dilated, the temperature 97° F. and the pulse 100, and complaining of great pain at the epigastrium. There was no distension of the abdomen, but great tenderness about the epigastric and left hypochondriac regions. The knees were drawn up and abdominal respiration was absent. Having heard the history of her recent treatment for gastric ulcer and elicited the fact of the sudden pain almost immediately after drinking, Mr. Jowers determined to operate at once, six hours after perforation. An enema of two ounces of brandy with two ounces of beef-tea having been given and ether administered an oblique incision was made about an inch below the margin of the ribs, three inches in length, and commencing about an inch to the left of the middle line. Having divided the muscles and stopped the hæmorrhage, which was somewhat free, the peritoneum was opened; there was no rush of flatus and the organs below appeared to be quite natural. Having with some difficulty brought the stomach into view by gently pulling down the omentum, its anterior surface was carefully explored with the forefinger. Failing to detect perforation, the omentum was pushed aside and the posterior surface similarly examined. Here the operator could feel, high up and towards the cardiac end, an indurated patch with a central depression, but the posterior layers of the omentum prevented actual contact. Having thus made out the situation of the ulcer, the incision in the abdominal wall was enlarged to the left, the anterior layers of the omentum were torn through, and the lesser peritoneal cavity was opened. A distinct odour of cocoa was now detected. With considerable trouble the perforation, which was of the size of a threepenny bit, was brought into view by gently pulling down the stomach wall bit by bit. Pinching up the outer coats of the stomach first on one side and then the other side of the ulcer, a full inch from the edges of the perforation two sutures of medium-size silk were passed, to act as guides and to assist in holding the stomach. The anterior wall, which had protruded during the manipulations necessary to bring the perforation into view, having been returned into the abdomen, Dr. Black, who assisted, held the perforation well in view by means of the guides. Sponges being packed around, one blade of a pair of scissors was then introduced into the perforation, and the indurated tissues, which extended half an inch around the opening, were divided in a line with the external wound. Curved incisions with the scissors were made from the extremities of these so as to excise the ulcer. A small sponge on a string was introduced into the stomach through the opening thus left, while fine silk sutures were introduced after Lembert's method, fourteen in all being passed. After the sutures had been tied the abdomen was carefully flushed with boiled water at 100° and the abdominal wound closed with silkworm gut sutures, no drainage-tube being employed. The operation took about two hours, the chief time being occupied in the passing of sutures in the stomach wall. For the first five days the patient was fed entirely by the rectum, the injections consisting of peptonised milk and beef-tea, one large warm-water injection being given daily, and a morphia suppository when in pain. On the first day (Sept 6th) she was sick four times, bringing up a dark-green watery fluid, with very offensive, almost fæcal odour. The temperature was normal. On Sept. 7th she was very slightly sick and the odour had disappeared. On the 11th, five days after the operation, feeding by the mouth was commenced by teaspoonfuls of milk given at intervals of half an hour, but as she complained of slight pain in the evening the milk was stopped. On this day the wound was dressed and two stitches were removed. On the following day feeding was recommenced, but as she vomited it was suspended until the next day, and brandy added to the injections. On the 15th there was found to be

[1] Erichsen: Science and Art of Surgery, vol. i., 1895.

a little superficial suppuration about the wound, and a drainage-tube was inserted. All went well till twelve days after the operation, when she was taking three ounces of milk and three ounces of mutton broth alternately at intervals of two hours. In the morning of that day she complained of pain in the region of the stomach going through to the back, and smaller quantities of food were given. About 1 P.M. the patient suddenly complained of intense pain and vomited. Mr. Jowers was summoned to the hospital and found her cold, collapsed, and complaining of intense pain in the region of the wound and "spreading all over the stomach," as she expressed it. The abdomen was flat, but did not move with respiration. Mr. Jowers had seen her at twelve o'clock and had suggested a tablespoonful of hot water instead of the food then due; this had been given, and a second one half an hour later. After giving a hypodermic injection of morphia, and learning that the patient had become considerably worse during the half-hour since he had been sent for, he decided to reopen the abdomen. An injection of beef-tea and brandy having been given and the patient anæsthetised, the wound was opened up. The stomach was found to be adherent to the anterior abdominal wall in the region of the wound, and had to be separated. The site of the gastric ulcer was adherent to the posterior wall of the lesser peritoneal cavity, and as no sign of extravasation of stomach contents could be seen it was not separated. Half a pint of milk was then injected into the stomach, and, no escape taking place, the

REFERENCES AND PARTICULARS OF TWENTY-FIVE CASES OF OPERATION FOR PERFORATED GASTRIC ULCER.

Name of operator.	Record.	Liver dulness.	Vomiting at moment of perforation.	Time of operation after perforation.	Situation of ulcer.	Method of treating ulcer.	Site of incision.	Result.
Page.	THE LANCET: Mar. 24th, 1894.	Absent.	—	40 hours.	Anterior.	Ulcer scraped and sutured.	Middle line.	Death, 34 hours.
Page.	THE LANCET: Mar. 24th, 1894.	—	—	18 hours.	Anterior, near cardiac end.	Sutured.	2 in. left of middle.	Death, 14 hours.
Morse.	THE LANCET: Mar. 17th, 1894.	—	Vomiting.	5 hours.	Anterior, near cardiac end.	Sutured.	Left of middle.	Recovery.
Maclaren's cases referred to by Mr. Page in discussion.	THE LANCET: Mar. 17th, 1894 (Case 1).	—	—	9 hours.	Anterior, midway between pylorus and cardiac end.	Sutured.	Through left linea semi-lunaris.	Death, 3 days.
	THE LANCET: Mar. 17th, 1894 (Case 2).	—	—	9 hours.	Anterior, 2 in. from cardiac end.	Sutured.	Through left linea semi-lunaris.	Recovery
	THE LANCET: Mar. 17th, 1894 (Case 3).	—	—	4 hours.	Anterior, 2 in. from cardiac end.	Sutured.	Through left linea semi-lunaris.	Death, 3 days.
Godlee.	THE LANCET: Mar. 17th, 1894.	—	—	24 hours.	Near pylorus.	—	Middle line.	—
Bennett.	THE LANCET: July 7th, 1894.	Absent.	No vomiting.	10½ hours.	Posterior, 2½ in. from pylorus.	Sutured.	Middle line.	Recovery.
Swain.	THE LANCET: July 7th, 1894.	—	—	19½ hours	Posterior, near cardiac end.	Excised and sutured.	Middle and transverse to left.	Death.
Eve.	THE LANCET: Nov. 10th, 1894.	—	—	61 hours.	Anterior, near cardiac end.	Sutured.	—	Death, 48 hours.
Eve.	THE LANCET: Nov. 10th, 1894.	—	—	80 hours.	Anterior, near lesser curvature.	—	—	Death.
Ewart and Bennett.	THE LANCET: Nov. 17th, 1894.	Absent.	No vomiting.	8 days.	(?)	—	Middle line.	Recovery.*
Pepper.	Brit. Med. Jour.: Oct. 20th, 1894.	—	—	36 hours.	Anterior, close to lesser curvature.	Pared the edges and sutured.	—	Death, 3 days.†
Morris.	Brit. Med. Jour.: Oct. 20th, 1894.	Absent.	No vomiting.	3 hours.	Anterior, close to the pylorus.	Sutured.	—	Recovery.
Aitchison.	Brit. Med. Jour.: Oct. 20th, 1894.	—	—	2 hours.	Posterior.	Sutured.	—	Death, 9 days.
Barling.	Brit. Med. Jour.: Jan. 9th, 1892 (Case 1).	—	Vomiting.	—	Anterior, midway.	—	—	Death, 24 hours.‡
Barling.	Brit. Med. Jour.: Jan. 9th, 1892 (Case 2).	—	Vomiting.	4 days.	Anterior, midway.	Sutured.	Middle line.	Death, 30 hours.
Barling.	Brit. Med. Jour.: Jan. 17th, 1893 (Case 3).	—	Vomiting.	3 weeks.	—	—	—	Recovery.§
O'Callaghan.	Brit. Med. Jour.: Oct. 28th, 1894 (Case 1).	—	—	24 hours.	—	—	—	Death within six hours.
O'Callaghan.	Brit. Med. Jour.: Oct. 28th, 1894 (Case 2).	—	—	24 hours.	—	—	—	Death within six hours.
Bourchier Nicholson.	Brit. Med. Jour.: Nov. 3rd, 1894.	Absent.	—	3 hours.	Anterior, near œsophagus.	Sutured.	Middle line.	Recovery.
Hastings Gilford.	Brit. Med. Jour.: May 6th, 1893.	—	No vomiting.	10½ hours.	Posterior, near cardiac end.	Sutured.	One inch to left parallel with the linea alba.	Death, 1 month.
Warrington Haward and Lee Dickinson.	Brit. Med. Jour.: May 6th, 1893.	—	—	14 hours.	—	Gastric fistula made.	—	Death.
Haslam.	Brit. Med. Jour.: Nov. 11th, 1893.	—	—	3½ hours.	Anterior, near cardiac end.	—	Linea semi-lunaris.	Death, 45 hours.
Jowers.	THE LANCET: Case related in the present issue.	—	Vomiting.	6 hours.	Posterior, near cardiac end.	Excised and sutured.	Oblique.	Recovery.

* Ulcer believed to be in upper part of stomach. Adhesions were so dense that actual perforation was not searched for.
† The necropsy showed that death was due to a second perforation on posterior of stomach.
‡ At the necropsy a perforated gastric ulcer was found.
§ Operated on three weeks after perforation for a collection of pus in left hypochondrium.

stomach was re-emptied and washed out. The abdomen was washed out and the wound closed, a drainage-tube being this time employed. After this operation the patient was much collapsed. Nutrient enemata were continued and injections of strychnia resorted to, but for some days it was doubtful whether she could recover. She was, however, able to retain the enemata, and after the first day small quantities of food.

Remarks by Mr. JOWERS.—I am unable to account for the symptoms which led to the second operation unless they were simply due to colic or possibly the stretching of adhesions. I had no doubt at the time that leakage, either from the sutured opening or from the giving way of a second ulcer, had occurred. About a month later the patient had a similar attack. Shortly after a meal, consisting of scraped meat (peptonised) and toast, she was seized with violent pain and became cold and collapsed as before, the pulse rising to 120. The abdomen, however, moved with respiration, and after a hypodermic injection of morphia the pain was relieved. Two hours later she vomited (no blood) and was much better. She has had no sickness or pain after food for some weeks, and has been getting up and going out of doors. In this case there were three favourable points—viz., (1) a clear history of gastric ulcer; (2) the opportunity of operating early before peritonitis had set in; and (3) the fact that perforation took place into the lesser peritoneal sac, thus avoiding the soiling of the general peritoneal cavity. I think it must also be an advantage when the patient vomits, as happened here, and so empties the stomach of a great part of its contents, though Dreschfield has shown that vomiting rarely takes place in these cases. I have not seen the use of guides noted in the cases recorded. I found them of such help in holding up the stomach and keeping the perforation well in view during stitching that I would advocate their use when there is difficulty. Their employment involves less strain than the plan of bringing the organ out of the wound, and would prevent a perforation when once found being lost, as occurred in one case where the operation had to be abandoned and in which it was only found again post mortem. I have been able to find references to twenty-five cases of operation for perforated gastric ulcer, of which a brief abstract is appended. Of fifteen, in which the site of the ulcer is stated, ten were at the cardiac end, three at the pyloric, and two in the middle. I cannot help thinking that the oblique incision gives the best access to the cardiac end, which is the more fixed and where rupture has been shown to be most frequent. In cases where there is a history of gastric ulcer, and where symptoms of rupture follow immediately upon taking food or drink, I should be inclined to adopt it, but when in the absence of previous history the diagnosis had to be based upon collapse, distension, loss of liver dulness, &c. I should adopt the median, as the rupture might be intestinal. My best thanks are due to those in whose immediate charge the patient was for the indefatigable care taken of her, and to which she owes her recovery.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Discussion on the Affections of the Nervous System occurring in the Early (secondary) Stages of Syphilis.

AN ordinary meeting of this society was held on Feb. 26th, Mr. T. PICKERING PICK being in the chair.

A discussion on the Affections of the Nervous System occurring in the Early Stages of Syphilis was opened by the President, Mr. HUTCHINSON. He said that although the discussion was designed to afford opportunity for criticism and the expression of opinions, its principal object was the collection of facts. The recital of single cases was asked for, and contributions to pathological knowledge were more especially desired. By the term "early" it was designed to comprise the first two years. Attention was asked to the following topics:—1. The general differences between affections of the nervous system in late and in early stages of syphilis. 2. The state of general diminution of sensation which had been alleged (Fournier) to attend the exanthem stage of syphilis. 3. Certain rare cases of general paresis of both motion and sensation which were met with in secondary syphilis, and from which complete recovery might take place. 4. The early occurrence of arterial disease which might influence the nervous system secondarily: (*a*) in reference to the brain; (*b*) in reference to the spinal cord. 5. A group of not very infrequent cases, in which a rapidly developed form of paraplegia occurred early in syphilis, and from which, although it might be for a time almost complete, partial recovery usually took place. 6. The occasional occurrence of paralysis of single nerves (unsymmetrically). 7. The influence of syphilis in producing recurring herpes. 8. The parallelism between certain affections of the brain and spinal cord in secondary syphilis, with acute inflammation of the eye and ear occurring in the same stage. 9. The parallelism between these syphilitic affections of the nervous system and those of somewhat similar character which had been observed after the acute exanthemata. 10. The occasional occurrence of a peculiar form of partial anæsthesia. 11. The affections of the nervous system occurring in early periods of syphilis did not, when once cured, tend to relapse. 12. The necessity for the full use of mercury. From the facts he brought forward Mr. Hutchinson drew the following conclusions, which he offered as the basis for discussion: 1. The nervous system might suffer in very various ways during the secondary period of syphilis, and it was very important to recognise this fact since the affections were usually acute and destructive unless prompt treatment were adopted. 2. It was very exceptional that any disease of the nervous system occurred earlier than the sixth month. 3. Many, perhaps most, of the affections of the nervous system in the secondary period were secondary to disease of the bloodvessels. Under this head were included extensive implications of the minute arteries of the pia mater, whether of the brain or cord. 4. Amongst the diseases which were probably primarily of the nerve structures themselves we might recognise (1) acute affections of the eye and ear, of the latter sometimes attended by paralysis of the portio dura; (2) acute forms of polyneuritis, usually symmetrical and transitory; (3) a peculiar and very definite form of paraplegia due to transverse myelitis; (4) certain rare and peculiar forms of hemianæsthesia. 5. It was not disputed that at much later periods in the course of syphilis affections closely similar to the above might occur, but it was believed that when they did so they were much slower in onset, less severe and more chronic in progress, and less amenable to specific treatment. 6. The prognosis of these affections was good up to a certain point if efficient treatment were commenced early. 7. It was believed that these early affections of the nervous system in syphilis occurred almost invariably in those in whom the treatment in the early stages had been neglected.

Dr. GOWERS said that he felt under considerable obscurity, which was not due to any lack of lucidity on the part of the President in introducing the subject, but was rather due to the subject itself. Of secondary syphilis in the strict sense of the word he knew nothing; at any rate, as far as the nervous system was concerned. With regard to syphilis and the nervous system, he only knew from personal observation of syphilitic disease of the larger arteries of the brain. He knew of no disease of the arteries of the spinal cord that could be called syphilitic. With regard to syphilis of the smaller arteries of the brain there was an observation by Dr. Barlow which established the fact that there might be a syphilitic disease of the minute arteries scattered throughout the whole substance of the brain. The disease of the large arteries occurred usually during the first seven or eight years after the acquisition of syphilis, and was absolutely identical in its characters and effects and distribution from first to last, affecting the middle cerebral and basilar arteries by preference, and producing the same effects at all periods. He thought it could not be distinguished in any case as secondary or as tertiary by naked-eye or microscopical evidence, though its aspect was materially changed when the patient had been subjected to a course of anti-syphilitic treatment. A fact of practical importance with which he had been much impressed was that the dose of iodide of potassium as usually given, say fifteen grains three times a day, after two or three months ceased to influence the disease, which again became aggressive. Though the microbe of syphilis had not been discovered, it was necessary in order to obtain a real grasp of the disease to conceive it to be due to a specific organism. Besides the arterial disease there was the gumma, which was certainly of less frequent occurrence than was the arterial disease during twelve years after the primary infection; for

one case of gumma there were three or four of arterial disease produced by syphilis. Gummata always sprang from the membranes, never from the brain substance or from the substance of the spinal cord, and when present in the cerebral substance they could always be traced to some fold of the membranes. It was probable that a similar inflammation of the membranes was the origin of the indurated form of pachymeningitis sometimes met with in the cord. Small gummatous growths had also been found upon the nerves. Though locomotor ataxy was a sequel of syphilis in such a vast proportion of cases that there must be a causal relationship between them, yet the ataxy could not be cured by anti-syphilitic treatment. If locomotor ataxy were compared with the effects of alcohol upon nerves or of other chemical poisons, such as arsenic and lead, or those produced by diphtheria, there could be no doubt that the ataxy was the result of a chemical poison left behind by syphilis. The condition of inflammation might be associated with gummatous deposit in very varying degree, and the more acute the condition the more would the inflammatory phenomena preponderate. In the cases of acute cerebral meningitis which were sometimes checked or ended by mercury the inflammation was very acute, and there was little or no time for the production of characteristic gummatous tissue. He doubted at the present time even more than he did in 1880—when he published his work on "The Diagnosis of Diseases of the Spinal Cord"—whether syphilitic arterial disease played any part in the production of acute spinal myelitis. The fact that acute transverse myelitis was frequent in the subjects of constitutional syphilis had long been a familiar fact; but there was also this conspicuous fact about these cases, as about all cases in which inflammation preponderated over tissue production, that in proportion as this was the case anti-syphilitic treatment failed. Who that had kept in touch with the therapeutics of the past could have any doubt regarding the influence of mercury upon simple inflammation, and who was there who could place any confidence whatever in mercury as a test of the syphilitic nature or otherwise of acute inflammation? These cases, treated as energetically and promptly as possible, ran a course absolutely indistinguishable in every case from that of cases of transverse myelitis in which syphilis could be absolutely excluded. The syphilitic and non-syphilitic cases ran a parallel course. The same applied to arterial disease of the brain. It was only in the cases in which there was not the tendency to recovery which all acute processes involved that we could place any confidence whatever in the significance of the anti-syphilitic treatment. He quoted the case of a patient who had an indurated cellulitis in the region of the spine, who was not benefited by iodide of potassium, but who recovered under mercury. He found it difficult to judge whether to class this as a secondary or a tertiary lesion. From the therapeutical effect one should say it was secondary, but from the lapse of time since infection it should perhaps be declared tertiary. The President had suggested that gonorrhœal myelitis might be the result of syphilis. So far as he knew, only two cases of gonorrhœal myelitis were on record—one in a German journal and the other recorded by himself in the *Clinical Journal*.

On the motion of Sir WILLIAM BROADBENT, seconded by Dr. ALTHAUS, the debate was adjourned till the next meeting.

MEDICAL SOCIETY OF LONDON.

Cases of Liver and Gall-duct Surgery.—Craniectomy.

AN ordinary meeting of this society was held on Feb. 25th Mr. FREDERICK TREVES, Vice-President, being in the chair.

Mr. MALCOLM related in detail all the cases of Liver and Gall-duct Surgery that had come under his care—namely:—1. A case in which by exploration he failed to make out exactly what was the nature of the disease. This case was illustrated by another in which no operation was performed, but malignant disease was diagnosed and verified by post-mortem examination. 2. A case in which by exploration he found malignant disease of the lower surface of the liver. 3. A case in which he performed ovariotomy and found malignant disease of the pancreas and duodenum, causing obstruction of the common bile-ducts. These patients had died from the natural progress of their diseases, and the surgical treatment could not be said to have hastened the results. 4. A case in which he operated three times for numerous hydatids of the liver and subperitoneal connective tissue on Feb. 17th and Dec. 2nd, 1891, and on March 12th, 1894, the patient having borne a child between the second and third operations. She was reported to have recently shown signs of the development of another cyst. 5. A case of a child five years and a half old from whose liver he removed two hydatid cysts. 6. A case in which he removed 789 stones from the gall-bladder. 7. A case in which Mr. Doran opened an abscess over the gall-duct on Nov. 7th, 1893. Mr. Malcolm extracted 134 stones on Dec. 2nd, 1893, and Mr. Doran extracted three more stones on May 26th, 1894, after which the wound healed. 8. A case in which he removed four stones from the gall-bladder, cystic duct, hepatic duct, and common bile-duct. The last five cases had all recovered and were alive. The difficulties of diagnosis and manipulation were commented on, and the necessity of operation whenever gall-stones caused serious trouble was urged. It was pointed out that in liver surgery the dangers of septicæmia and of irritation and obstruction of the intestines could usually be avoided, and that the disposition of the colon and its mesentery facilitated drainage. An opinion was expressed in agreement with that of König[1] that the duration of an operation was not so important in causing shock as the nature of the manipulation performed. The following points were suggested for discussion. 1. The evidence by which a diagnosis can be made between gall-stones and cancer of the liver. 2. The possibility of gall-stones being overlooked in the ducts, and the possibility of their collecting in the ducts within the liver substance, and rapidly descending after other stones had been cleared out of the gall-bladder or liver ducts. 3. The length of time after infection at which a patient may be considered safe from a further development of hydatids. 4. The fact that in the third operation on the fourth case related there were removed a number of hydatids in which the daughter cysts were shrivelled up as if dead, although the tumour had been growing very recently and had shown no signs of diminution in size immediately before the operation.—Mr. DORAN thought that the gall-stones he removed passed down from the liver since Mr. Malcolm's operation. He asked for information as to the length of time it took for a gall-stone to form. If the stones could form in the bladder it might be advisable to perform a secondary cholecystectomy in some cases. This was not very difficult, because the procedure was practically extra-peritoneal, the gall-bladder being simply peeled out of its adhesions.—Mr. ARBUTHNOT LANE said he had operated upon a large number of cases in which the trouble was directly or indirectly due to gall-stones. His conclusions were that in these cases the diagnosis was comparatively easy and the results good if operation were not deferred until too late. As this form of surgery was still in its infancy surgeons were apt to be called upon to act at a stage in the case so late that the patient's condition gave little or no hope of success. The same was true of vermiform appendix cases and of cases of acute intestinal obstruction. He then gave details of four fatal cases in which he had operated. The first occurred four years ago, when he operated upon a female patient who had a stone of large size impacted in the common bile-duct. He incised the duct, extracted the stone, and afterwards attempted to close the incision in the duct, but he could only do this imperfectly. The patient died on the third or fourth day afterwards, probably from peritonitis. This death might probably have been prevented if he had used gauze packing. His second fatal case was that of a man who for fifteen years had suffered from jaundice with occasional exacerbations accompanied by fever and prostration. He found the gall-bladder and the ducts stuffed with calculi, and as the condition of the patient did not permit of a long operation, and as there was a fair quantity of bile in the gall-bladder he established a communication between that viscus and the duodenum by means of Murphy's button. The patient died two months later, when a small perforating ulcer was found in the duodenum proximal to the artificial opening. At the necropsy the ducts within the liver were found filled with calculi. The third case was that of a woman who entered Guy's Hospital in a feeble and delirious state, stating that she had been deeply jaundiced for four years. The colon was found fixed to the gall-bladder by adhesions, and in the common bile-duct were several stones, which were removed. The patient never recovered from the delirium and prostration. In the fourth case a woman, who had been jaundiced for five

[1] Brit. Med. Jour., Epitome, vol. i., 1895, p. 26.

months, when straining at stool felt a tearing pain in the region of the gall-bladder, and a tumour developed in that situation. She was nearly moribund on admission, the gall-bladder was found distended with clot, and a rupture extended through into the substance of the liver. She did not recover. In these four fatal cases he thought that his own surgery was responsible for but one death. He had operated successfully on a very large number of other cases.—Mr. HENRY MORRIS referred to a case in which he had dealt with multiple abdominal hydatids. Three times they were attacked by operation, and yet a large number were left, and they appeared to disturb the health of the patient very little, who followed an arduous occupation as a baker. His conclusions were that these cases of multiple hydatids were unfavourable for surgical interference. He once had to operate on a case of abdominal hydatid in which the tumour was very large and simulated ovarian dropsy, and had been treated elsewhere by tapping. He cut down in the middle line, and found the cyst to be connected with the under surface of the liver. He evacuated an enormous number of daughter cysts, removed the greater part of the parent cyst, but was obliged to leave the upper portion, which was too firmly adherent to be removed. The patient died from shock. There was still a great deal to be learnt concerning the development of gall-stones. He believed it depended greatly upon obstruction to the flow of bile. Many stones were formed in the ducts of the liver itself, others in the gall-bladder, and their formation was promoted by any cause interfering with the production of cholesterin, or of the bile acids which were the solvents of cholesterin. He had removed a number of stones from the gall-bladder of a woman, and the calculi were as tightly packed as were the bricks of a wall. After emptying the gall-bladder he probed the bile-ducts, but could feel no calculi. Some time later she passed two or three stones, and on one occasion he picked out eleven calculi from the sinus, which afterwards healed firmly. He believed that these latter stones were formed in the gall-bladder. The facetting of a calculus did not of necessity indicate that it must have been packed tightly with other stones; it might be produced by the churning up of a larger stone with smaller stones in the mucus of the gall-bladder. When gall-stones were impacted in the common bile-duct and there was long-standing jaundice, and if the gall-bladder were shrunken and contracted, the prognosis was unfavourable and convalescence after operation was slow; hæmorrhage was obstinate and death likely to occur from shock and peritonitis. But operation was more successful in cases in which the gall-bladder was distended with fluid so as to form a tumour.—Mr. GODLEE said he once opened a tropical abscess in the liver and found in it some small facetted gall-stones. Some years ago at Brompton Hospital he cut down upon an obscure tumour in the right lumbar region of a female patient. He found the transverse colon adherent, and there was a tumour in the gall-bladder and another in the liver. He gave a bad prognosis and closed the wound, but two years afterwards the patient passed a large gall-stone.—Mr. MALCOLM, in reply, said he thought that in Mr. Doran's case there was persistent obstruction in the cystic duct. It was curious that in the cases of multiple hydatids the tumours were usually confined to the abdominal cavity and the organs within it.

Dr. WALLIS ORD and Mr. EDWARD COTTERELL then related a case of Microcephalus treated by Linear Craniectomy. The patient was a female child aged nineteen months, who was first seen by Dr. Ord on July 28th, 1893, at the West-end Hospital for Nervous Diseases. The child was born at full term, there was no difficulty at birth, and no instruments were used. She was a healthy and well-nourished child until thirteen months old, when she had influenza, which was followed by "gastric fever." At the age of sixteen months she was suddenly seized with fits, which appeared to be general convulsions marked with an extreme degree of opisthotonos. She was said to have had sixty fits in five days. After the fits passed off the child began to waste and lose power in her limbs, and not to notice what was going on. Upon admittance the child was in a very feeble condition and quite unable to maintain a sitting position for more than a moment, quickly tumbling over. The normal relation of size between the face and the skull was reversed. There was no trace of fontanelles. The child was dull and apathetic and easily roused by loud sounds. She was not attracted by objects moved before her in order to catch her sight unless they were of a very bright or luminous character. She was unaware of the presence of anyone approaching her cot quietly. Mr. Work Dodd examined the eyes, but could find nothing to account for the condition, and the loss of sight appeared to have been due to a weakness of the power of perception analogous to the weakness elsewhere in the body. In consultation with Mr. Edward Cotterell, linear craniectomy was advised, as the child appeared to be steadily losing ground. The operation was performed in sections, the dates when the bone was removed being Aug. 9th, 1893, Aug. 23rd, Sept. 4th, and Sept. 13th. Improvement began after the second operation and was steadily maintained, until she became like an ordinary child, running and walking about, and with every indication of very good eyesight. In these cases the bones of the skull were found to be much thinner than normal, and there was often little or no diploe to be found. When bone was removed the dura mater usually bulged into the groove. In performing linear craniectomy it was necessary to avoid hyperpyrexia and shock. Hyperpyrexia might be usually prevented by only taking away a small piece of bone at each sitting and by using care not to bruise the subjacent brain. Shock might be prevented by the above-mentioned means and also by applying an improvised Esmarch's bandage to prevent hæmorrhage.—Dr. SHUTTLEWORTH had had under his care three cases of microcephalic idiots which had not improved at all after operation. The first was a child three and a half years of age with a head circumference of fifteen inches. It had been operated on by Mr. Horsley, at first by longitudinal incisions and afterwards by transverse. Six months after the second operation it was noted that there was no mental improvement, though the child had ceased to beat its head. The second case, also operated on by Mr. Horsley, was the son of a medical man and had a head circumference of seventeen inches, and there were paralytic symptoms. One year after operation the child was worse, both physically and mentally. The third case was operated on by a Newcastle surgeon and remained a speechless idiot. In these cases there was an arrest of development of the brain at the fifth or sixth month of fœtal life, and union of the bones followed this arrest of cerebral growth.—Mr. LANE asked if the case shown were really one of microcephalus.—Dr. ORD, in reply, said the case had been regarded as one of microcephalus or synostosis of the sutures. There was no evidence of tumour or of meningeal trouble. The case was not extreme; it was an instance of primary mischief in the bones of the skull, and not of primary atrophy of the brain.

HARVEIAN SOCIETY OF LONDON.

Syphilitic Diseases of the Brain.

A MEETING of this society was held on Feb. 21st, Sir JOHN WILLIAMS, Bart., President, being in the chair.

Dr. JAMES TAYLOR read a paper on Syphilitic Diseases of the Brain. These were classified in three groups: (1) meningitis, (2) gummata in the membranes with secondary affection of the brain proper, and (3) changes in the bloodvessels—endarteritis and periarteritis—and combinations of two or more of these. The symptoms commonly present in these three forms were briefly described, and also the symptomatology of another class of case characterised by considerable mental change similar to that occurring in general paralysis together with optic neuritis, but no distinct paralysis of the limbs. Dr. Taylor had no knowledge of the pathological changes underlying this clinical state, but suspected affection of the meninges and vessels. In two cases which he had seen, marked improvement, with subsidence of optic neuritis, had followed the energetic use of anti-syphilitic remedies, although some degree of mental change still remained. The treatment called for when syphilitic disease of the brain had been diagnosed was touched upon, and the extreme importance of using mercury freely, as well as iodide of potassium, instead of the latter alone, was insisted upon. Dr. Taylor, in conclusion, described the clinical condition in two cases which he had observed through the kindness of Dr. Hughlings Jackson and Dr. Ferrier, and also the results of post-mortem examination. One was a case of gumma in the membranes and the other of widespread disease—endarteritis and periarteritis—of cerebral vessels. Illustrative sections with a drawing and photograph were also shown.

The PRESIDENT related a case of syphilitic hemiplegia during pregnancy accompanied by thrombosis of the veins of

the chest. The condition was cured by mercurial inunction. He discussed the question of temperature in syphilitic meningitis.

Dr. GUTHRIE referred to the importance of certain minor manifestations of cerebral syphilis, and in particular of states of transitory aphasia and of ophthalmoplegia. He gave his experience of these in several instances.

Dr. CAGNEY spoke of the difficulty of recognising meningeal gummata at an early stage, and gave the history of a case in which the resulting abscess had extensively destroyed the inner tables of the skull and perforated the scalp, while the symptoms throughout had been ambiguous.

Dr. SHUTTLEWORTH stated his experience of congenital syphilitic brain disease in children. The symptoms began at the period of the second dentition. Dulness of intellect was followed by paralysis and later by imbecility with a proneness to use bad language and an ultimate breakdown. The necropsy showed an atrophied brain with thickened meninges.

Mr. Brodie, Dr. Hazell, and Dr. Macevoy also spoke, and Dr. Taylor replied.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held at the Great Northern Central Hospital on Feb. 14th, the President, Dr. J. G. GLOVER, being in the chair.

Mr. G. MOWER WHITE showed an infant the subject of Bifid Cranium with Meningocele or Encephalocele, or a combination of both conditions. The tumour, which was situated in the occipital region, was the size of a hazel nut and was reducible; the child was well developed in every other way and quite healthy. After discussing the condition, especially from the point of view of prognosis, Mr. White pointed out that this was a favourable case for operative procedure. In the first instance, however, he intended to apply an apparatus so as to protect the tumour, and at the same time to exert pressure on it in hopes that the condition might improve. If that failed he described an operative method which he had devised.—These remarks were discussed by Dr. GALLOWAY and Mr. CRESSWELL, who were opposed to surgical interference, as the tumour was small and unlikely to increase or come to harm.

Mr. BRYCE ORME showed the specimens from a case of Spontaneous Comminuted Fracture of the Femur in a patient aged thirty-six years, the subject of general paralysis. Suppuration ensued in the thigh and death resulted.—Dr. BAILEY mentioned a similar case from his own experience and remarked on the rarity of such cases.

Dr. EDWARD S. TAIT and Dr. LINDLEY SCOTT showed cases of Albuminuric Retinitis, and a discussion arose on the prognostic value of this condition occurring during the course of Bright's disease. The opinion generally held seemed to be that in most cases the condition was of grave import, betokening a serious degree of arterial degeneration, probably generally diffused; but cases were quoted which tended to prove that so far as any time limit was concerned little confidence was to be placed in its import. Cases occurred in which it appeared only a week or two before death in subjects apparently comparatively in good health, whereas in other cases it remained with little alteration for long periods, the patients remaining well.

Dr. JAMES GALLOWAY showed a man aged forty-six years who had been the victim of a severe accident in 1887, involving fracture of the frontal and parietal bones, followed by hemiplegia and other severe nerve lesions. Since that time he had worked in lead, and was subject to gout, lately having developed albuminuria. Having both these degenerative influences at work many complicated nerve lesions had resulted. He was shown on the present occasion on account of the striking alterations in certain associated movements of his eyes. It was found in any associated movement of the eyeballs to the right or left that the pupil nearest the object looked at dilated, and the other pupil contracted—that is to say, the pupil of the eye in which contraction of the internal rectus occurred also contracted, while the pupil in the eye of which the external rectus was in action dilated.—Considerable discussion resulted on this case, but no distinct explanation was forthcoming.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Osteomalacia subsequent to Scirrhus of the Mamma.—Exhibition of Specimens.

A MEETING of this society was held on Feb 13th, Professor SHERIDAN DELEPINE, President, being in the chair.

Mr. C. E. RICHMOND related a case where Osteomalacia and Spontaneous Fracture of the Femur occurred in a patient who was the subject of a Scirrhus of the Mamma. The breast and axillary glands and fat were thoroughly cleared away, and there was no local recurrence. Visceral deposits, however, followed very rapidly, and the patient succumbed just over five months after operation. Before this, bone softening was observed in the pelvis, and the left femur (the diameter of which was much increased) snapped across when the patient was getting into bed. Fair union was obtained in four or five weeks, with disappearance of much of the thickening. Sections of the original breast tumour, of the liver, and of the iliac crest were shown, all exhibiting cancerous growth. The fractured femur also was shown, and a decalcified section taken from the site of bony union entirely negatived the presence of cancer at this spot, and merely showed the ossification of fibrous callus. Reference was made to a similar case in the Museum of University College, London.

Mr. J. W. SMITH showed a specimen of Fistula between the Gall-bladder and Duodenum, and a Gall-stone 1½ in. in length and 3¾ in. in circumference, from a woman aged sixty-three who was admitted to hospital with a history of five days' acute intestinal obstruction, with stercoraceous vomiting. Laparotomy was performed and the gall-stone removed from the intestine. Death occurred seven hours later. The point of impaction was about the middle of the jejunum, the bowel above being greatly distended and congested. The cystic duct was obliterated, the hepatic and common bile-ducts remaining patent. The gall-bladder contained two smaller stones.

Dr. DRESCHFELD also showed a specimen in which a gall-stone had set up Ulceration of the Gall-bladder, with secondary biliary duodenal fistula, arrest of the gall-stone in the jejunum, and intestinal obstruction.

Card specimens were shown by Dr. Enrich, Dr. Helme, Dr. Kelynack, and Mr. Littler.

KIDDERMINSTER MEDICAL SOCIETY.

Castration for Enlarged Prostate.—A Case of Enterostomy.—A Case of Cerebral Abscess, Operation, Death.—Malarial Fever.—Exhibition of Cases and Specimens.—Fees under the Notification Act

A MEETING of this society was held on Feb. 8th, Mr. S. STRETTON being in the chair.

Mr. J. L STRETTON read notes of a case of Castration for Enlarged Prostate. A man aged sixty years had had difficulty in passing urine for some months, and on the advice of Dr. Suckling of Birmingham had been using a catheter. For six weeks he had been much worse and had not passed any urine except by the catheter. He was first seen by Mr. Stretton on Jan. 4th. He was a healthy looking man. A No. 8 catheter entered the bladder easily, per rectum the prostate could be felt as large as a hen's egg, the right testicle was enlarged and nodular in places, and the urine contained a considerable quantity of pus and débris. On Jan. 15th the bladder was washed out three times daily, but the urine still contained pus and he was unable to dispense with the catheter. Both testicles were removed through a single incision. Ten days later he passed urine naturally for the first time. On the 28th he passed eight ounces at one time. The wound healed. He developed delusions and became very troublesome, and passed his urine in bed. This condition lasted for about a week or ten days, and he then began to improve. He could sit up and passed his urine naturally; its condition had improved, but the bladder was still being washed out with nitrate of silver solution. The prostate was about half its previous size. In the discussion which ensued several of the members were able to confirm the shrinking of the prostate. The report on the right testicle showed it to be tuberculous, and this, it was pointed out, rendered the case more unfavourable, but apparently did not interfere with the process of the operation. The

fact of one or both testicles being diseased certainly confirmed the desirability of their removal.

Mr. J. L. STRETTON also read notes of a case of Enterostomy. A man aged fifty-five years was sent by Mr. D. Fitch. He had always enjoyed good health. The day before being seen he was seized with pain in the abdomen, after a meal of bread and cheese the previous night; he endeavoured to evacuate the bowel without success; he had vomited constantly, and when first seen the vomited matter was fæcal; he had passed no flatus. Rectal injections, castor oil, and opium had been tried without effect. The abdomen was distended and boardlike. On opening the abdomen there was evidence of slight peritonitis and a small quantity of fluid. The small intestine was much distended and congested; this was traced in both directions with a negative result. As the patient's condition was bad a coil of distended gut was opened and stitched to the abdominal wall. A copious discharge of liquid fæces followed. The following day he was much more comfortable, the distension had disappeared, and he had no pain, but his pulse was bad. During the next four days he several times became collapsed, and in spite of the free use of stimulants he died in this state on the sixth day. At a necropsy twenty-four hours after death the bowels were found to be nearly empty. No cause of obstruction could be discovered, and there were no signs of peritonitis. Mr. Stretton pointed out the difficulty of diagnosis in such cases, and maintained that the operation performed offered the best chance of recovery.

Dr. EVANS read notes of a case of Cerebral Abscess which he had operated upon. A girl aged sixteen years was admitted to hospital on Oct. 11th, 1894. She had always had fairly good health and no definite disease except ear trouble, which began two or three years ago without any known cause, and has since "run matter." One month previously, whilst at work, the patient was suddenly seized with a "fit," in which she remained insensible for two or three hours. The left side of the face and the left arm and leg twitched during the fit (this was corroborated by the medical attendant). Since this time she had been laid up. Headache began three or four months ago and had been "on and off" ever since, but after the fit and since had become more intense. Right internal strabismus had come on since the fit. The patient had been peculiar and strange in manner for about two years. The bowels were regular. She had only menstruated once about two years ago. The patient's mother had been in a lunatic asylum for twelve years, also her mother's brother. Her mother had had several children and no miscarriages; some of the patient's brothers were considered "queer" by their neighbours. On admission the patient appeared to have lost flesh, and stated she had. She lay on her right side and took no interest in her surroundings, not, as a rule, speaking unless spoken to, but would then give an intelligent answer. Cerebration was slow and she was very drowsy, but this was probably due to the bromide she had taken. The pupils were widely dilated, equal, and reacted to light and accommodation. She stated that sometimes she saw double with the right eye. Her expression varied sometimes; her face expressed pain; at other times there was a far-off, dreamy look about the eyes. She complained very much of pain in the frontal region, also of shooting pain down the right arm and sometimes in the left arm; the pain in the head was always worse at night and she often cried for some time with it. There was no loss of power in any of the limbs, and sensation was normal. The plantar and knee reflexes were absent; there was no ankle-clonus. Well-marked optic neuritis was present in both eyes, but the sight was normal with the exception of the double vision already mentioned. The sense of smell and taste was normal. There was a slight discharge from the right ear, a few drops of thin pus in the twenty-four hours, and this had remained the same since the first onset according to the patient's statement. She heard the ticking of a watch one yard from the left ear, but could not hear it when placed close to the right ear; when placed on the skull in the neighbourhood of the right ear she could hear it. The temperature was normal and the pulse 72. Eight days after admission to hospital the patient vomited two drachms of clear fluid; the pain in the head and left arm continued to be severe. Seventeen days after admission she suffered from delusions and thought the nurses were black. These continued for two or three days, together with severe pain, preventing sleep at night. The hypodermic injection of one-sixth of a grain of morphia relieved these symptoms and she slept better. Loss of power in the left arm gradually supervened, and much difficulty was soon experienced in getting her to take nourishment. She gradually became drowsy and semi-comatose. On Nov. 3rd a consultation was held on the patient, and it was decided that she was suffering from cerebral abscess, probably in the temporo-sphenoidal lobe, and that an attempt should be made to evacuate its contents. The patient was accordingly anæsthetised with chloroform and a semilunar scalp flap dissected down over the region of the lower part of the right fissure of Rolando. The periosteum having been raised from the bone, the trephine was applied over the region of the motor centre for the face. On the dura mater being exposed it was seen to bulge into the trephine opening, and there was complete absence of brain pulsation, the dura mater being very tense. The dura mater was opened by a crucial incision, and the brain substance probed in several directions with a fine aspirating needle; the needle was eventually introduced in a forward direction for a distance of about two and a half inches, when pus was seen to be exuding from the end of it. The abscess cavity was then aspirated and about three and a half ounces of oily and very offensive pus were evacuated. The opening in the brain was then enlarged by means of a long pair of sinus forceps introduced by the side of the needle, and the little finger was passed apparently into the abscess cavity. A small drainage-tube was next passed down to the bottom of the opening and the parts well washed with boracic acid lotion. The semilunar flap was replaced and fastened in position with sutures, an opening being made in its centre for the passage of the drainage-tube. After the operation the patient was at first very restless, crying out with pain in the head and moving the right arm. The restlessness continued through the night, gradually subsiding towards the morning, when she seemed fairly comfortable and inclined to sleep, and took her nourishment better. The wound was dressed the next day; there had been a good deal of oozing. On the second day after the operation the note was that the patient had been drowsy the greater part of the night after a hypodermic injection of one-eighth of a grain of morphia, and had taken six ounces of milk, one ounce of brandy, and some meat juice. This morning she looked bad and had a dusky complexion. The pulse was 168, weak, the respiration 40, and the temperature 100·2° F. She had coughed several times during the night. After this the patient gradually became comatose and sank and died on the morning of Nov. 7th, the fourth day after the operation. Previously to operation the temperature never rose above normal. On making a post-mortem examination an abscess the size of a large hen's-egg was found occupying the right frontal lobe; the abscess had a well-defined wall about an eighth of an inch thick, and in it was found the opening that the aspirating needle had made, but no other opening. Dr. Evans considered that there were several points of interest connected with the case. In the first place, as to the cause of the abscess, he could only suppose that the condition must have arisen from the ear disease. It seemed to him strange that the abscess should be situated in the frontal lobe so far from the seat of the original trouble; but in the absence of any history or sign of syphilis, tubercle, or other disease he could attribute the abscess to nothing else. The symptoms, too, were not very pronounced, at all events at first; the loss of power in the arm and leg was not at all well marked, and the headache was only severe at times. Of course there was the history of the fit—a solitary one—followed by slight strabismus, though the optic neuritis was well marked all the time the patient was under observation. There was very little vomiting and later some mental disturbance, as evidenced by illusions and hallucinations, but otherwise the faculties and intelligence of the patient seemed little disturbed. It seemed curious that so large an abscess, which—judging from the thickness of its wall—must have been in existence for some time, should have produced such a comparatively small amount of trouble. The diagnosis of the case, too, was thus rendered somewhat difficult, and the fact of the mother and uncle being insane was misleading. Dr. Evans stated that in future operations he should use an aspirating needle to search for the abscess, as in this case, but having struck the abscess he would pass a sharp-pointed bistoury down by the side of the needle in order to make sure of opening the wall, and so allowing a free escape for the matter. In the discussion which followed, it was suggested that had the operation been performed sooner the patient would have had a better chance of recovery.

Dr. EVANS also showed the case of a man who had fallen

from an apple tree and sustained a Compound Fracture of the Thigh, the bone projecting through the trouser, and also considerable injuries to the shoulder, probably fracture of the surgical neck of the humerus, with fracture of the acromion process of the scapula and of the neck of that bone as well. At the time the patient left the hospital he could walk with the aid of a crutch, and there was about three-quarters of an inch shortening of the injured leg. He could move his arm in almost any direction, placing his hand on his head without difficulty.

Dr. EVANS showed a Uterus he had removed per vaginam for Malignant Disease, having first ligatured the broad ligaments through an abdominal incision. The patient died from shock about twelve hours after the operation.

Mr. BETHUNE showed a large Fibroid about the size of a lemon removed from a multipara aged thirty-seven immediately after the birth of her ninth child. It was attached to the anterior uterine wall immediately within the cervix, and caused considerable obstruction to the birth of the child. It was ligatured and removed with scissors, and no bad symptom supervened.—Mr. HODGSON MOORE thought it would be better to wait until the uterus had resumed its normal condition unless the tumour prevented delivery.

Mr. M. JOHNSTON read a paper on Malarial Fever.

Mr. J. L. STRETTON brought forward the form of account demanded by the local authority for Notification Certificates. He doubted whether this, which was in reality a second report of each case, could be legally enforced. Since the meeting he has informed the members that his objection had been brought before the town council, and that their clerk had stated that the form could not be legally insisted upon, and it has therefore been withdrawn.

MANCHESTER MEDICAL SOCIETY.

Analysis of Fifty-five Cases of Carcinoma of the Breast.—Exhibition of Cases.

A MEETING of this society was held on Feb. 20th, the President, Mr. F. A. SOUTHAM, being in the chair.

Mr. C. E. RICHMOND showed a case following Destruction of Lymphatics from Lupoid Ulceration. Allusion was made to the compound character of the enlargement, consisting primarily of distension of lymph spaces due to absence of drainage by lymphatics, and secondarily to hyperplasia of areolar tissue caused by the irritation of such lymph accumulation.—Mr. C. E. Richmond also showed a case where he had performed Abdominal Section for a large Cyst probably splenic in origin.

Dr. BRAZIL brought forward two cases in which the symptoms of Appendicitis and Rheumatism were present simultaneously, and in which complete and rapid recovery took place under salicylate of soda. After referring to the literature of the subject Dr. Brazil discussed the relation between the two disorders.

Mr. JONES read a paper on an Analysis of Fifty-five Cases of Carcinoma of the Breast, based on an analysis of fifty-five operations for the removal of mammary cancer. The mortality attending the operation was under 2 per cent., and the proportion of recoveries was given as 12·6 per cent. Mr. Jones laid stress on the importance of a routine examination of the axilla through the operation wound, even although no obvious enlargement of the glands could be detected. In 48 of the 55 cases the axilla was thoroughly cleared out, and this with care need not add much, if at all, to the risks of the operation.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

The Adjourned Discussion on Cardiac Therapeutics.

A MEETING of this society was held on Feb. 28th to continue the adjourned discussion on Cardiac Therapeutics, Dr. CLOUSTON, President, being in the chair.

Dr. BYROM BRAMWELL, continuing the discussion, considered the general aspect of cardiac therapeutics. He dwelt on the difficulty of ascertaining the exact condition of the myocardium. He laid special stress on the reserve force of the heart and how important it was to note how it responded to tonics. The success of the treatment depended on the regulation of the minute details of the life of the patient as much as on the giving of drugs. In neurotic, functional, or curable cases it was necessary first to remove the cause; secondly, to correct by appropriate treatment any deranged or abnormal condition which appeared to be present in the heart or in any of the other organs, then, if the patient were anæmic, to treat the anæmia; thirdly, to regulate the whole mode of life of the individual; fourthly, to reassure the patient as to the curable nature of the condition; fifthly, to administer remedies to soothe the irritable heart and to tone it up when in a condition of irritable weakness. In organic cases, such as acute simple rheumatic endocarditis, much might be done to limit the severity of the lesion by appropriate treatment. He emphasised especially the importance of rest in removing valvular strain. At the same time the heart muscle must be kept in good condition during convalescence by the use of tonics, as iron, arsenic, strychnine, &c. In chronic cases it was important to avoid strain, either muscular or arterial, to keep the heart muscle in the highest possible state of health and efficiency, and to protect the patient from everything which was likely to exert an injurious influence on the heart. In chronic cases, when compensation was well maintained, it was inadvisable to administer powerful cardiac tonics. When compensation broke down the treatment must be guided by the nature of the lesion and the condition of the cardiac muscle. In fatty degeneration due to deficient hæmoglobin large doses of iron should be given; in pernicious anæmia, arsenic. In cases of flabby and dilated heart Schott's plan of graduated exercise was very efficacious. Caution, however, should be used. In cases of senile heart in mitral regurgitation with high arterial tension the cardiac strain should be removed by reducing the blood pressure and the heart toned up. In those cases strophanthus was preferable to digitalis. He had found *exercise* a valuable means of treatment in neurotic affections, fatty infiltration, many gouty conditions, and many valvular lesions if the myocardium was healthy. Oertel's plan of treatment was chiefly useful in cases of fatty infiltration, Schott's in the same group of cases, and in valvular lesions provided the muscle was reasonably sound.

Dr. STOCKMAN remarked that with regard to the action of cardiac tonics they were as a rule used when the heart was exhausted and beating more rapidly and less forcibly than normal, and hence the amount of blood discharged at each pulsation was less, the arterial system became depleted and the venous engorged. The primary effect of a cardiac tonic was to alter the elasticity of the muscular fibres so that they expanded and contracted more completely without, at first at least, becoming more active. Thus the heart took longer to dilate, contracted more thoroughly and so filled better and threw out a greater amount of blood. The blood pressure rose and the heart became better nourished. The diuretic effect of tonics was due to the fact that the veins and lymphatics were able to absorb effused fluid and the kidneys discharged the extra water. Thus it was improbable that one member of the same group was a better diuretic than another. The action might commence more quickly and continue longer with one than with another, but the action was the same. He had seen a good deal of the action of strophanthus, digitalis, adonis vernalis and convallaria, and had got much the same results with all. Sometimes the drugs were strikingly successful, sometimes they failed. With regard to iodide of potassium pharmacologists differed considerably. That it dilated small vessels and caused a fall in blood pressure had been denied. Small doses were said by present authorities to act like digitalis, and larger doses to diminish blood pressure. The last case on which he (Dr. Stockman) had made observations was that of a man with spinal sclerosis, who was taking 300 grains per diem without any alteration in the pulse as shown by finger or sphygmometer. It did good in aneurysm, possibly because the disease might be syphilitic in many cases. He laid stress on the purgative treatment of cardiac cases with much dropsy. With regard to tapping the pleura he cautioned against what was practically starvation, brought about in this way by the abstraction of albumen.

Professor GREENFIELD said that he intervened in this discussion solely in order to bear testimony to the enormous value of strophanthus, which he regarded as one of the most important therapeutic agents discovered of late years. As he had not been present at the first meeting, his position as to the debate was that of the vast majority of medical practitioners, who would be influenced only by the necessarily brief abstracts in the medical journals. It would be

disastrous if the impression were conveyed that the leaders of medical opinion in Edinburgh regarded strophanthus with distrust, and as only applicable to critical conditions. He felt it a duty to give his emphatic testimony to its value, not as an exceptionable, but as the most commonly applicable of all the group of special cardiac agents. To its use he owed the life of many patients and friends, in conditions which before its introduction he would have regarded as hopeless, and in cases where all known remedies, including digitalis, convallaria, &c., had absolutely failed. For nine years he had used it in a large variety of conditions of cardiac failure, including cases of all forms and combinations of valvular disease: dilatation from senile degeneration and from acute strain or disease, as in acute pericarditis in pneumonia; in acute pneumonia, including influenzal, where cardiac embarrassment was so often the cause of death; in severe prostration from hæmorrhage; after severe operations, including those where peritonitis was present, &c., and in febrile conditions with consequent rapid action and tendency to failure of the heart; in febrile delirium tremens, &c. In the severe forms of acute dilatation, senile and other, its effect was most striking. And if only for its value in severe cases of acute pneumonia it would rank as an agent of unsurpassed value. He had, on a rough estimate, used it in about 400 cases of these diseases in hospital practice alone, apart from other cases. He need hardly say that it was used in conjunction with all other suitable remedies appropriate to special conditions—such as rest, or, in some cases, moderate exercise, posture, relief of bronchitis or other associated conditions, attention to food, condition of stomach and bowels, removal of dropsical effusions, &c.—on which he supposed all agreed. Nor need he mention further the value of combination with other drugs, as nitrites, alcoholic and other stimulants—tonics, such as arsenic, iron, strychnine, &c. He had frequently alternated its use with that of digitalis, in order to judge of their comparative value in various conditions. The result had been that whilst in some cases, especially in certain well-defined conditions with which all are familiar, digitalis proved equally or more efficient, in the vast majority strophanthus was safer, more certain, and less attended with danger, and succeeded where digitalis proved useless. Objections had been made to the want of uniformity of strophanthus preparations. This was no doubt true to some extent. But the defective action was soon perceived, and a better supply could be readily obtained. This fact pointed only to the necessity for proper pharmacological experiment before allowing its sale, for the defects were due mainly to the use of bad or used-up material, and the vendors should be prosecuted for the sale of bad preparations. But could anyone say that digitalis was better in this respect? All pharmacologists agreed that the preparations of digitalis were most uncertain in the amount of the various active ingredients contained in them. Moreover, its tendency to cumulative action, the uncertainty of the time of the appearance of dangerous symptoms, &c. rendered it necessary to restrict the employment of large doses to a limited period. On the contrary, the action of strophanthus was so rarely attended with this risk that it could be given continuously in large doses where needed. In only one case, the first in which he used it, had any serious toxic symptoms appeared, probably as the result of idiosyncrasy, and no such case had since come under his notice. In some critical cases, where there appeared to be almost no hope of recovery, he had given very large quantities—ten, fifteen, and even twenty minims every two hours—and with resulting cure. In such cases it was necessary to give it with the finger on the pulse, diminishing or increasing the dose as it appeared necessary. From the remarkable results of cure in formerly hopeless cases he was convinced that neglect of this remedy would result in the loss of many valuable lives. Hence he would urge those of his colleagues who were doubtful of its utility to try it again.

Dr. JAMES RITCHIE thought that drugs and exercise came a long way after rest as therapeutic agents in cardiac cases. He did not think cardiac tonics were necessary so long as compensation was maintained. He found strophanthus best for obtaining rapid action in serious cases, but he thought the action not so long continued as with digitalis, whose action lasted a long time after the drug had been discontinued. He thought digitalis gave a distinct tonic action on the heart which was not obtained with strophanthus.

Dr. WILLIAM RUSSELL remarked that what struck him most on the first night of the discussion were the omissions. He thought they would have heard about the unsuccessful cases as well as the successful. There were, he said, cardiac cases which required no special cardiac treatment, as when there were no symptoms referable to cardiac insufficiency and the cardiac lesion was discovered accidentally, or perhaps when the symptoms complained of had no possible connexion with the cardiac lesion. Such cases were very common, and the existence of the cardiac lesion was apt to obscure the diagnosis or to mislead entirely. This was the more unfortunate as the essential cardiac tonics were contraindicated. The second class of cases were those in which functional cardiac trouble was a marked feature, and had to be dealt with at the same time, treatment being directed to the fundamental or primary conditions. Such cases were the anæmias, general debilities, and neuroses. In the same group might be included cases of heart overstrain in youth, with dilatation and apical and basic murmurs. In such cases digitalis was useful, with, of course, prohibition of the cause. In organic cases he thought nothing should be done for the heart directly unless there was evidence of insufficiency. Especial care should be taken to remove all cause of strain, both direct and reflex, especially digestive troubles, which were often erroneously attributed to the cardiac lesion. Of all the lesions aortic stenosis, in his experience, least required therapeutic interference when there was not cardiac insufficiency. It was extraordinary the amount of stenosis which might be present without apparently disturbing the individual. When aortic stenosis was accompanied by incompetence the conditions, as a rule, were different. He did not find digitalis applicable in all cases of double aortic lesion with want of compensation. He did not think with regurgitation digitalis was applicable when the pulse-rate was only from 60 to 70. Digitalis prolonged the diastole, and so led to greater regurgitation and over-distention of the ventricle. On the other hand, aortic regurgitation with a quick pulse, which could be slowed to 70 to 80, was benefited by digitalis. In cases of slow pulse he had found marked benefit from belladonna, probably from the drug relieving spasm in the smaller arteries and their capillaries, the spasm not only causing increased obstruction, but also anæmia of the heart muscle. He thought iodide of potassium, which produced considerable benefit in some cases, probably acted in the same way. In mitral incompetence digitalis acted admirably when the heart-rate was rapid. When the heart-rate was slow, iron and strychnia did better. In mitral stenosis the relation of heart-rate to treatment was the reverse of what it was in aortic or mitral regurgitation. A prolonged diastole was to be aimed at. When the heart was rapid good results might be obtained from digitalis. When anasarca was present it was better given hypodermically. He regarded, then, the heart-rate as the chief index to cardiac therapeutics. In addition, however, to rate, there was pulse tension. Where the tension was high, digitalis was contraindicated. His chief hope regarding strophanthus was that it might prove useful in cases where digitalis seemed to be contraindicated. He had had some cases which tended to encourage this hope.

Dr. CLOUSTON said that in certain cases of mania there was a very rapid heart action, running up to 130 or 140 per minute; the cause was probably central. He had had three cases of melancholia with a pulse never under 120. He had used digitalis with iodide and bromide of potassium in addition to the ordinary mental treatment. In other cases the opposite condition existed—stupor with œdema. Here cardiac tonics were useful. Cardiac derangements were very common in the insane.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Microscopic Sections of the Central Nervous System.—Topographical Anatomy of the Pancreas.—Cold-water Starch as a Basis for an Injection Mass in Dissecting-room Work.

A MEETING of this section was held on Feb. 1st, Mr. FRASER, President, being in the chair.

Professor SYMINGTON gave a Microscopic Demonstration of a series of Sections of various parts of the Central Nervous System, stained by Golgi's method, which he had made last summer in Professor Kölliker's laboratory in Würzburg. Most of the specimens were hardened and stained by the

rapid method—viz., small pieces of fresh tissue were put into a mixture of one part of a 1 per cent. solution of osmic acid with four parts of a 3·5 per cent. solution of bichromate of potash. After being a few days in this mixture it was transferred to a 0·75 per cent. solution of nitrate of silver. All the sections were mounted in xylol balsam, and so far they had kept perfectly. He had found the method easier and more reliable than it was generally supposed to be in this country. He must, however, warn beginners that they need not expect to get such perfect pictures as those given in Golgi's great work, "Untersuchungen über den feineren Bau des centralen und peripherischen Nervensystems." The illustrations in this book were obviously diagrammatic and constructed from numerous sections.—Professor PURSER said that this method had entirely revolutionised our ideas of nervous physiology. Formerly it was thought that there must be complete structural continuity between cells for an impulse to pass; now it was believed that no cell was in structural continuity with another cell, but only in contiguity. Several difficulties occur in connexion with Golgi's method. The chief objection was that some cells stained and some did not. One could not say that where the staining stopped the process of the cell also stopped. It was necessary to work with young animals to get good results. His preparations were made from rats killed the day they were born.—Professor MCWEENEY did not think it so very difficult a method. He did not find that it made any difference if he left the preparations in the solution some time longer than necessary. To clear the sections he first placed them in creasote, then in xylol and carbolic acid, and then in xylol. Finally, he mounted in Canada balsam, without using a cover glass. He found that there was a tendency to the deposit of a coarse granular precipitate on the physiological surface of the section.

Professor SYMINGTON read a paper on the Topographical Anatomy of the Pancreas. He had investigated the subject by hardening the abdominal viscera *in situ* by the injection of a 1 per cent. solution of chromic acid. The results differed in several respects from those of His. He thought that the pancreas was more easily investigated by the chromic acid method of His than by frozen sections.

Professor SYMINGTON also read a note on the use of Cold-water Starch as a basis for an Injection Mass suitable for ordinary dissecting-room work.—Professor CUNNINGHAM thought that for immediate use the addition of spirit to it was an improvement, as it could both preserve and inject at the same time.

SECTION OF PATHOLOGY.

Retro-peritoneal Rupture of the Duodenum.—Crystalline Branched Renal Calculus removed by Nephrolithotomy.—Fracture of the Sacrum.

A meeting of this section was held on Feb. 8th, Dr. J. A. SCOTT, President, being in the chair.

Dr. TAYLOR read a paper on Retro-peritoneal Rupture of the Duodenum. The patient was a drayman who was crushed between the point of the shaft of his own dray and the projecting hinder end of the shaft of another dray as he was walking backwards endeavouring to lead his horse through a narrow passage. He walked about half a mile to Sir Patrick Dun's Hospital, and asked the resident medical officer on duty to give him something to relieve his pain so that he might continue his work. No symptoms of severe internal injury being apparent he was allowed to proceed back to his work. The pain, however, increased considerably, and he went home and lay down. His condition became gradually worse, and next day he passed into a state of collapse, and died about thirty-six hours after the injury. The post-mortem examination revealed evidences of recent peritonitis in the region of the ascending colon and neighbouring coils of small intestine. Behind the colon were found considerable quantities of flatus and a watery fæcal-coloured fluid. A rupture of the duodenum near the termination of its second stage was found. The edges of it were lacerated and somewhat swollen. It measured about an inch in its greatest diameter. There was considerable difficulty in finding out where the rupture had taken place, and it was only after a protracted search that its exact site was determined.—Dr. BENNETT thought, from the fact of the very rapid peritonitis, that there must have been an opening into the peritoneum. He had seen a case of retro-peritoneal urinary extravasation lasting six weeks without producing peritonitis.—Mr. W. J. THOMPSON remembered a case which was taken into St. Vincent's Hospital. As there were symptoms of rupture the abdomen was opened. There was an escape of fæces, but no flatus. No trace of any rupture could be found, but after death a rupture the size of a threepenny bit was discovered at the junction of the second and third stages of the duodenum.—Dr. TAYLOR, in reply, said that as the subject of his paper showed no symptoms beyond what one would expect to find in any mild form of injury, and as he was himself anxious to go away, he was not detained. He had searched very carefully for any rupture into the peritoneum, but could find none. He agreed with Mr. Thompson as to the great difficulty of finding the rupture. When the abdomen was opened in the middle line it was extremely difficult to examine the duodenum. When he had the abdomen freely opened post mortem it took him nearly an hour to find the rupture.

Dr. C. YELVERTON PEARSON read notes of a case of Nephrolithotomy, and exhibited the Stone which he had removed from a man aged thirty-two years by the lumbar incision. The specimen was a branched calculus of oxalate of lime, weighing 200 gr. A great portion of its surface was covered with beautiful crystals of ammonio-magnesian phosphate.—Dr. ROCHE wished to know what were the points which would help to make the diagnosis between stone and tuberculous pyelitis.—Dr. BENNETT said that the diagnosis could be made by means of a microscopic examination for the tubercle bacillus. With regard to the structure of the stone he differed from Dr. Pearson, and thought it consisted of crystals of ammoniaco-magnesian phosphate.—Dr. ROCHE stated that he had the urine twice examined for tubercle bacilli by Professor McWeeney, but none were found.—Dr. PEARSON, replying, said he attached great importance to the presence or absence of tubercle bacilli in making a diagnosis. He thought it was very rare, however, to have tuberculous disease of the kidney without having it also in the genital organs.

Dr. E. H. BENNETT exhibited a United Fracture of the Sacrum, in which the line of fracture was oblique. The lower fragment, unlike the transverse fracture of sacrum, was displaced upwards and to the left. Dr. Bennett discussed the question as to whether the injury in this case had been caused by a violent kick delivered from behind with the right foot.

THE HUNTERIAN SOCIETY.—The seventy-sixth annual general meeting of the Hunterian Society was held at the London Institution on Feb. 13th, Mr. Charters J. Symonds, president, being in the chair. Mr. Thomas Rushbrooke, M.A., L.R.C.P., &c., was proposed for election as an Ordinary Fellow. Mr. Cotman and Dr. Arnold Chaplin were appointed to act as scrutineers of the ballot. The report of the council for the past year was then read by the senior honorary secretary, Dr. Hingston Fox, and adopted upon the motion of Mr. Cotman, seconded by Dr. F. J. Smith. The financial report and balance sheet and the report of the Library Committee were read and adopted. It was proposed by Dr. A. T. Davies, and seconded by Mr. Cotman, that a hearty vote of thanks be tendered to the president for his valuable services during the past year, which had contributed so much to the success of the society. It was proposed by Dr. Pitt, and seconded by Mr. Rutter, that the thanks of the meeting be accorded to the vice-presidents, honorary treasurer, and honorary librarian for their services during the past year. A vote of thanks was passed to the council, the honorary secretaries, and the auditors. A ballot was then taken and the following gentlemen were appointed officers of the society for the ensuing year:—President: Charters James Symonds, M.S., M.D. Vice-Presidents: Henry J. Thorp, John S. E. Cotman, R. Hingston Fox, M.D., and T. Mark Hovell. Treasurer: F. Charlewood Turner, M.D. Trustees: H. I. Fotherby, M.D., and F. M. Corner. Librarian: Arthur T. Davies, M.D. Orator: G. Newton Pitt, M.D. Secretaries: T. H. Openshaw, M.S., and Fred. J. Smith. M.D. Council: Sir Hugh R. Beevor, M.D., T. H. Arnold Chaplin, M.D., Louis A. Dunn, M.S., Hope Grant, Francis R. Humphreys, Patrick Manson, M.D., John W. Oliver, M.D., George W. Potter, M.D., Henry J. Sequeira, St. Clair B. Shadwell, R. G. Tatham, and John F. Woods. Auditors: F. Gordon Brown, Hope Grant, Francis R. Humphreys, and Thomas Glover Lyon, M.D.

Reviews and Notices of Books.

An American Text-book of Gynæcology, Medical and Surgical, for Practitioners and Students. By Various Authors. Edited by J. M. BALDY, M.D. With 360 Illustrations in text, and 37 coloured and half-tone Plates. Philadelphia: W. B. Saunders. 1894.

THIS text-book has been prepared by various American authors, all of whom are teachers of this branch of surgery in leading medical schools and hospitals, with the view of presenting a picture of gynæcological surgery and treatment as they are practised in America. The work is essentially of a practical character, and is intended to be a working text-book for physicians and students. The list of authors consists of ten names — Drs. Baldy, Byford, Cragin, Etheridge, Goodell, Kelly, Krug, Montgomery, Pryor, and Tuttle. It is stated in the preface that the work embodies as nearly as possible the combined opinions of all the authors, although it is understood that each individual author must be free from absolute responsibility for any particular statement; the editor states that all extraneous matters and discussions have been excluded, and that he has attempted to allow nothing unnecessary to cumber the text, which he claims as thoroughly up to date. In reading this, as is the case with many similar American text-books, it strikes the English reader as being wonderful that patients should not be unwilling to submit to examination on some of the complicated couches, or, rather, so-called "chairs," such as the Indianapolis gynæcological chair (Fig. 3). As a matter of good taste, we are ourselves inclined to think that, if it is considered necessary to figure the proper position for the dorsal examination, the genu-pectoral position, the lateral position, as well as the lithotomy position and the position of the patient on Trendelenberg's table, the necessary information might be conveyed by diagrams and descriptions rather than by actual photographs of naked women in these various positions. In the chapter on the Technique of Gynæcological Operations a good deal of space is devoted to a description of the procedures necessary to render the hands of the operator aseptic, and to a description of the other precautions which it is the duty of those engaged in gynæcological operations to observe. But we think it is a pity not to distinguish between what is really essential and what is not, for the more complicated the system the less likely is it to be practically carried out. Thus what is the use of advising gynæcologists to avoid touching unhealthy or suppurating wounds, when they are daily making vaginal examinations by which the hands are necessarily frequently contaminated with all kinds of septic matter? A typical instance is the vaginal examination of an advanced case of cancer of the uterus. And, again, we do not see that it is of much practical use to advise operators only to wear gloves that can be washed. All such advice tends to divert attention from what is essentially necessary in order to avoid conveying septic infection, whether in the case of midwifery or of operative work. This we take to be the most thorough cleansing of the hands and nails with soap and water and a nail-brush, followed by thorough disinfection in a 1 in 1000 solution of corrosive sublimate immediately before touching the patient. The account given of the plastic operations required for ruptures of the perineum is clear and easily followed. It is noteworthy that the author of it is not greatly impressed with the advantages of the flap-splitting operation except in a limited proportion of cases. As regards the radical treatment of carcinoma of the cervix, in those cases which appear to be not too far advanced for operation the authors prefer total extirpation to the supra-vaginal amputation, on the ground that it is the more thorough of the two operations and because they think the operator cannot tell whether the cancer is limited to the cervix or has extended to the body of the uterus. The question as to which is the better operation is a very difficult one, and it can only be settled by comparing a large number of cases in which extirpation has been performed with a large number in which only the supra-vaginal amputation has been performed, the disease being in an early stage in both sets of cases, and seeing whether recurrence is less frequent in the one series than in the other. One of the best sections in the book is that dealing with Fibroid Tumours of the Uterus. Speaking of the electrical treatment of fibroids the authors say "the percentage of cures about represents the possible percentage of errors of diagnosis." The account of the surgical treatment of fibroids by hysterectomy, with intra-peritoneal treatment of the pedicle, is excellent, and better than that to be found so far as we have seen in any other text-book. It appears to us that the operation (Baer's) by which all the uterus is removed, with the exception of the vaginal portion of the cervix, is preferable to the removal of the entire uterus in these cases. The steps of both operations are carefully described.

The book is well printed and beautifully illustrated, and will be more especially valuable as a work of reference for information on special points in the technique of many gynæcological operations.

Edinburgh Hospital Reports. Published under the supervision of the Editorial Committee of the Royal Infirmary, the Royal Hospital for Sick Children, and the Royal Maternity and Simpson Memorial Hospital. Edited by G. A. GIBSON, M.D., D.Sc., C. W. CATHCART, M.A., M.B., JOHN THOMSON, M.D., and D. BERRY HART, M.D. Illustrated with Coloured Plates and Engravings. Vol. II. Edinburgh and London: Young J. Pentland. 1894.

THIS volume sustains in every respect the position taken by its predecessor, which it resembles in arrangement of contents, the first part comprising contributions from present and past members of the Edinburgh School, with a short but useful index; and the second statistical tables of the patients under treatment in the wards of the Royal Infirmary and the Royal Hospital for Sick Children, Edinburgh, from Oct. 1st, 1892, to Sept. 30th, 1893. The papers deal with a wide range of subjects in various departments of medical science, and are so numerous that we cannot do more than refer to those which appear to us to be of the greatest importance. Dr. John Wyllie writes on the Diagnostic Value of Patterns of Abdominal Tumidity and of Visible Peristaltic Spasm in cases of Chronic Obstruction of the Bowels and Chronic Obstruction of the Pylorus. Dr. R. A. Fleming contributes some Notes on the Physical Examination of the Intestines by the Method of Combined Percussion and Auscultation. Dr. D. Noel Paton has a contribution to the Study of the Influence of Fever on Hepatic Glycogenesis. Dr. Muir writes on Suppurations in Internal Organs. One of the most useful papers is that by Dr. Claud Muirhead on the Treatment of Enteric Fever. We hope this has been reprinted, so as to reach a larger section of the profession than those to whom this volume, however excellent, can be accessible. Dr. Affleck supplies clinical notes on cases of Gastric Ulcer, and Dr. R. F. C. Leith writes on Acute Perforating Ulcer of the Stomach, with some comparative references to the chronic form. Professor Sir T. Grainger Stewart and Dr. G. A. Gibson contribute a paper on Bulbar Lesions in Graves' Disease: a contribution to the Morbid Anatomy of Exophthalmic Goitre; the former also gives a study of a case of Nervous Disease exhibiting some features not hitherto described. Dr. Gibson and Dr. R. Muir write on Cardiac

Fibrosis as a result of Coronary Obstruction; Dr. J. Thompson on two cases of Valvular Heart Disease resulting from Fœtal Endocarditis; Dr. James Carmichael on Congenital Heart Disease—patent ductus arteriosus—Mitral Stenosis; Dr. James Mackenzie on Tricuspid Stenosis; Dr. Gibson on the Diagnostic Signs of Incompetence of the Pulmonary Valve. Dr. Lockhart Gillespie gives the cases of Organic Cerebral Disease admitted to the medical wards of the Royal Infirmary during the years 1892–93; Mr. Mowatt and Dr. Abernethy give the results of treatment in the ward for acute nervous diseases during the past year. Amongst the surgical contributions are Hints and Suggestions on the Practice of Surgery, and on the Intra-peritoneal Ligature of the Iliac Arteries, with notes of a successful case, by Professor Thomas Annandale; Practical Observations in Surgery, by Professor John Chiene, continued from the first volume; Notes on Operative Surgery, by Mr. Rutherford Morrison; on the Electrolysis of Vascular Tumours, by Dr. John Duncan; Tuberculosis of the Tunica Vaginalis Testis, with a clinical and pathological report of two cases, by Mr. Harold J. Stiles; Excision of the Ankle by External Incision, by Dr. James W. B. Hodsdon, also a case of Double Amputation for Senile Gangrene; the After-results of Simple Separation of the Epiphyses, by Mr. Charles A. Sturrock; and Notes on certain Groups of Cases of Surgical Disease, by Dr. Kenneth M. Douglas. Professor A. R. Simpson writes on Cancer in relation to Proliferating Ovarian Cystomata; Dr. D. Berry Hart, on the Pathological Classification of Diseases of Women with a Plea for a Revision of Current Views; and Mr. John Orr, on Abdominal Palpation and Auscultation in Obstetrics. The plates and figures in illustration of the text are clear and well executed.

From the medical report by Dr. A. Lockhart Gillespie we learn that 4243 patients were under treatment in the medical wards, the percentage of mortality on the total number of patients discharged was 9·59 per cent. and the average stay in hospital 30·6 days.

From the surgical report by Dr. Kenneth M. Douglas it appears that 4342 patients were under treatment, that the percentage mortality was 4·08, and the percentage mortality arising from 2469 operations was 5·4 per cent. This would be much diminished if septicæmia and erysipelas were banished from the wards—there are at least eighteen cases of the former recorded, of which sixteen proved fatal. In both these excellent statistical reports unnecessary labour is thrown on the registrars by the compilation of the column showing the average number of days spent by each group of patients in the wards, and it renders the table more confusing to the reader.

Mr. John Pirie supplies a short report of the cases treated in the Royal Hospital for Sick Children and in the Dispensary in Lauriston Lane.

LIBRARY TABLE.

Text-book of Hygiene. By GEORGE H. ROHÉ, M.D., Professor of Therapeutics, Hygiene, and Mental Diseases in the College of Physicians and Surgeons, Baltimore. Third edition. Philadelphia: The F. A. Davis Co.; London: F. J. Rebman. 1894.—While we fully admit the thoroughly reliable nature of the information recorded in this volume and the terseness and clearness of the literary style, we do not think the arrangement of the matter is always as happy as it might be, or the treatment of some subjects quite as full as they deserve. For instance, in the first two chapters the author deals with the hygiene of air and water and during the course of his remarks touches upon the analysis of these bodies, although a later chapter is specially devoted to this subject, in which the author is necessarily obliged to travel over some of the same ground again. In describing the different methods for the removal of sewage, while privies, pails, earth closets, and the pneumatic system of Liernier are explained, water-closets are reserved for the chapter on "Construction of Habitations." Ventilation is dismissed much too briefly, and vital statistics are disposed of in thirteen pages; while quarantine is treated with extreme exhaustiveness. The remarks on School Hygiene are excellent; and in the chapter on Marine Hygiene several valuable food tables are introduced. The author is an advocate of earth burial and thinks that the possibilities of cemeteries becoming centres for the spread of infectious disease, or the means of polluting water supplies, have been much exaggerated. Against cremation he urges medico-legal objections and expense. At the end of each chapter is appended a list of questions, which will be found to be of service to students and others.

Diagnostik der Inneren Krankheiten auf Grund der heutigen Untersuchungs-Methoden. Ein Lehrbuch für Aerzte und Studirende. Von Dr. OSWALD VIERORDT. Vierte verbesserte und vermehrte Auflage. Mit 180 Abbildungen im Text. Leipzig: Verlag von F. C. W. Vogel. 1894. Preis 10 Mark. (*Diagnosis of Internal Diseases according to Modern Methods of Examination.* A text-book for physicians and students. By Dr. OSWALD VIERORDT. Fourth edition, improved and enlarged. With 180 illustrations in the text. Leipzig: F. C. W. Vogel.) London: Williams and Norgate. 1894. Price 10*s.*—This admirable and exhaustive work of the Professor of Medicine at the University of Heidelberg is already familiar to English readers in the translation of a previous edition published by Mr. Pentland. There is, then, no need to dwell on its special merits. It forms one of a large and increasing class of text-books, which are intended to systematise the study of clinical medicine. It is only when the reader comes to peruse such books that he can appreciate the notable extension made of late years in the methods and resources that are available to the physician in his investigation of disease. This extension has been mainly due to the aid derived from instruments of precision and the application of chemical analysis to the examination of secretions and other fluids. Professor Vierordt states in the preface that there is no chapter of the book which has not been revised in the present edition, and he justly draws especial attention to the number (and we would add the excellence) of the illustrations, many of which are coloured. He acknowledges his indebtedness in this respect to the excellent Atlas of the Clinical Microscopy of the Blood by Dr. Rieder, whilst the figures representing micro-organisms are credited to Herr Honsell, one of his students. The work is planned on comprehensive lines, and we have failed to detect any omissions of importance in its very complete scheme. It is, in brief, a book which cannot fail to be of the greatest utility, not only to the clinical student, but also to the teacher and to the practitioner of medicine.

Bégaiement et autres Défauts de Prononciation. Par le Dr. CHERVIN, Directeur de l'Institut des Bègues de Paris. (*Stammering and other Defects of Utterance.* By Dr. CHERVIN, Director of the Paris Institution for the Treatment of Stammering.) Paris: Société d'Éditions Scientifiques. 1894.—About the year 1846 the author's father devised a method for the relief of stammering, based essentially on the cultivation and maintenance of due coördination between the nervous centres and the vocal organs. His analysis of the act of phonation recognises three separate periods or stages—viz., formation of ideas; putting of the ideas into words; and, lastly, vocal utterance of the words. Stammering may be caused by failure in any one of these three, but principally in the third. Dr. Chervin's course of treatment is continued for three weeks, the first being devoted to such vocal exercises as do not involve stammering, and to the cultivation of a methodical regular respiration. All this time the pupil is bound to absolute silence, except while practising with the

teacher. During the second week ordinary conversation is permitted, but only in a very slow, somewhat drawling manner, incessant attention being given to the respiration and the orderly movements of the tongue and lips. The division of the syllables must be carefully observed, but without interruptions or jerkiness. In the third week these aids are partially dispensed with, and a natural, easy diction is practised. In 1874 this method was favourably reported on by a Commission of the French Academy of Medicine. Dr. Chervin strongly opposes surgical procedures and hypnotism. Stammering (or rather stuttering) is much more common in males than in females, but this order is reversed in the case of lisping (*blésité*), or the faulty pronunciation of certain consonants. It seems that in French there are at least fourteen words denoting this condition. It is not due to organic causes and yields to the treatment already described. The book well deserves the attention of sufferers from these complaints.

Klinische Abbildungen. Sammlung von Darstellungen der Veränderung der äusseren Körperform bei inneren Krankheiten. Herausgegeben von Dr. H. CURSCHMANN. 57 Tafeln in Heliogravüre. (*Clinical Appearances Illustrated: Changes of Configuration produced by certain Internal Diseases.* Edited by Dr. CURSCHMANN of Leipzig. 57 Photogravure Plates.) Berlin: Julius Springer. 1894.—The majority of these plates represent visible deviations from normality produced in the living subject by diseases of the nervous system. Some of them contain several figures showing the consecutive stages of a given act or movement. Thus Nos. 8 and 9 consist of eleven figures representing the transition from the reclining to the erect posture in a case of infantile dystrophia muscularis progressiva. No. 11 has two views (side and back) of the same disease in a man aged twenty-two years. No. 10 shows the pseudo-hypertrophic form in a boy aged eleven years. Nos. 18 to 23 represent syringo-myelitis; some of them show full length figures, others are restricted to the head and shoulders and the hands. Plates 28 (three figures, three-quarter length) and 29 (hands only) illustrate athetosis. Plates 30 and 31 give four consecutive three-quarter-length views of the same person, showing the position of the head and the successive facial efforts during speech in a case of sclerosis multiplex cerebro-spinalis. Plates 41, 42, and 43 represent Basedow's disease (exophthalmic goitre). The last of the plates shows pseudoleukæmia lymphatica in a boy thirteen years of age, whose axillary glands, and more especially those of the left side of the neck, are enormously enlarged. All the plates are most effective both in execution and in selection of subjects. A copious explanation, in German, accompanies each of them. No. 27, representing paralysis agitans, is the only one which seems to convey but little information, as was perhaps unavoidable from the nature of the case. The plates and explanatory text, bound together, form a substantial and handsome volume. The plates are also published unbound, so that they may be conveniently handed round among an audience.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held on Wednesday, Feb. 20th, at 5.30 P.M. Mr. George Pollock, the President, occupied the chair. The following resolution was unanimously passed: "The committee of the Association of Fellows of the Royal College of Surgeons of England beg to express their deep regret at the loss which the Council of the College and the profession generally have sustained by the death of the President, Mr. Hulke, whose conduct in his distinguished position has earned the respect of all the Fellows of the College." The honorary secretary was asked to forward the resolution to the Council of the College and to send a copy to Mrs. Hulke.

The meeting had been summoned especially to take into consideration the resolutions which the Council of the College at their last meeting passed in answer to the request of the meeting of Fellows in January for the appointment of a joint committee of the Council and the Fellows to consider the question of obtaining a new Charter. In substance the reply of the Council was that there were objections to the formation of such a joint committee, but that they had appointed a committee to receive deputations from the Fellows of the College in reference to the subject of the resolution. The committee of the Association decided to urge the programme which they had recently put forward, and nominated twelve members of the committee and Association as a deputation to the committee of the Council. This concluded the business of the meeting.

THE PAY SYSTEM AT THE GREAT NORTHERN CENTRAL HOSPITAL.

THE annual meeting of governors was held at this hospital in the Holloway-road on Feb. 22nd, Mr. C. T. Murdoch presiding. The committee's report stated that the pay wards were opened on Oct. 1st, and that the committee, after careful consideration and full discussion of the subject with the medical committee, had taken means to restrict the use of these wards to patients of moderate incomes who were desirous of contributing to the cost of their maintenance while in the hospital. In order to protect the interests of medical men in private practice, the patients' circumstances were inquired into, a certificate signed by the ordinary medical attendant had to be produced, and full particulars of every application were considered by the house committee. The maximum payment was two guineas per week, and this might be reduced at the discretion of the house committee; it only met the actual cost of patients in these wards, and there was no intention of making a profit.

The CHAIRMAN, in moving the adoption of the report, said that at the present time the hospital had accommodation for about 100 patients and had cost nearly £100,000. A small number of "pay beds" had been provided in accordance with the constitution of the charity, to which they were obliged to conform, whatever their individual views might be. Moreover, in raising funds for the hospital it was clearly stated in all the public appeals that a certain number of "pay beds" would be established. These, however, bore but a small proportion to the free beds.

The report having been adopted, Dr. GLOVER moved: "That this meeting of governors of the Great Northern Central Hospital regrets the recent changes in the administration of the hospital, by which pay patients have been admitted to its wards to be attended gratuitously by the honorary staff, and is of opinion that such a system is not likely to conduce to the welfare of the hospital or the advantage of the poor, for whom such institutions exist, and should without further delay be abandoned." He believed that the opening of these pay wards was not only detrimental to the local practitioners, but would tend to reduce the subscriptions contributed by the public.

Mr. GRAHAM seconded the motion.

Mr. BURDETT then moved as an amendment: "That with the twofold object of loyally administering the affairs of the Great Northern Central Hospital on the lines of its constitution, and of reducing to a minimum the competition between the hospital and private practitioners, it is desirable that the system of pay wards now in operation be so modified that the patients in these wards may, if they desire it, be attended in the hospital by outside practitioners of their own selection; that the pay system, thus modified, be continued for an experimental period of five years; and that a committee of governors be appointed to prepare a detailed scheme on these lines, and to report to a meeting of the whole body of governors, to be convened for this special purpose in June next."

Dr. POTTER seconded the amendment.

The CHAIRMAN having stated that the committee and the members of the medical staff would regard the amendment as a vote of censure on them, it was put to the meeting, but only Mr. Burdett and Dr. Potter voted for it.

The resolution of Dr. Glover having also been lost, the meeting shortly afterwards separated.

THE LANCET.

LONDON: SATURDAY, MARCH 2, 1895.

ONCE more London is visited by an outbreak of this mysterious disease—the fifth in as many years. Few, if any, previous epidemics are recorded in which the country was visited in so many successive years. The epidemic last year was comparatively mild and half-hearted, but it has now suddenly assumed all the vigour of its earlier performances in 1889–90. Although isolated cases have been met with in London since November they were mostly mild, and showed little tendency to spread through a house and were accompanied by few complications. During the last week, however, a change has come over the scene. The disease has spread rapidly over the metropolis and many other towns, and rarely enters a house without attacking more than one of the inmates, and, most serious of all, unless the utmost prudence be observed bronchitis and pneumonia of a serious form are apt to supervene, and in not a few cases have proved fatal. We have spoken of the affection as a mysterious disease because, although it has been watched by a host of accurate observers—most of whom have had personal experience of its effects,—we are still in the dark as to its causes, as to the conditions which influence its outbreak in epidemic form, and as to the change of type from year to year which is such a singular characteristic of its natural history. Dr. CREIGHTON finds this change of type in previous epidemics clearly described by MOLYNEUX in the seventeenth century and by WARREN of Boston in the eighteenth, the latter stating in a letter to LETTSOM that the symptoms in two successive years were so dissimilar that it seemed as if two different diseases were in question. The Local Government Board report of Dr. PARSONS and the able monograph of Dr. RICHARD SISLEY both deal in a masterly way with the natural history of the disease and its mode of spread; and these and a host of other publications have detailed the clinical symptoms and the sequelæ of the disease. With regard to the symptoms, the most striking feature of the mass of literature on the subject is the variability of the symptoms and the absence of any constant characteristic. This applies even more markedly to the sequelæ, but the pulmonary conditions, which differ little from those excited by other causes, are probably the most common and next to them various nervous affections. Prolonged debility, muscular pains, and indefinite functional nervous symptoms grouped under the convenient term "neurasthenia" were particularly frequent; but except for the history of a previous attack of influenza there was nothing about the symptoms themselves to distinguish them from those met with in patients who had not suffered from influenza. So with regard to insanity. Undoubtedly an attack of influenza has in many cases brought about an acute attack of insanity, but in a recent discussion on the subject those best qualified to judge were of opinion that no form of insanity had come under their notice which was pathognomonic of influenza.

With the extension of work such as that of Dr. PARSONS and Dr. SISLEY much may yet be discovered as to the origin of the epidemics and the means of preventing them. The alleged discovery of a micro-organism as the cause of the disease has lacked general confirmation and has led to no fruitful developments. As to the question whether we have any effective prophylactic to protect the individual during an epidemic the reply must be in the negative. Quinine has been highly vaunted, but while by its tonic action it may help to resist infection, its action is far too uncertain and too occasionally successful to enable us to regard it as a specific antidote. During the first year much was heard—and smelt—of eucalyptus. Blotting-pads were saturated with it, hosts sprayed their guests with it as they entered the house, but influenza made its way into the houses that reeked of eucalyptus with as little ceremony as into those where things were left to take their course. We do know, however, that any depressing influences, such as a chill, indiscretions of diet, overwork or emotional conditions, especially dread of infection, not merely render a person liable to fall a victim to the complaint, but also tend to make the attack more severe, and common sense would suggest at such a time more than ordinary prudence in observing the laws of health. The rapid increase in the death-rate in the last few weeks warns us that the disease is not to be trifled with. There is this year a notable tendency to relapses, often accompanied with serious pulmonary symptoms, and the utmost caution should be observed before allowing patients to return to their ordinary occupations. By neglect or imprudence a trivial attack which would otherwise pass away in a few days may develop into a severe illness which may jeopardise life and incapacitate the patient from active work for many weeks.

DR. F. T. ROBERTS, in his Lettsomian Lectures on Combinations of Morbid Conditions of the Chest, easily makes good his contention that such combinations are very common and that their importance and significance are inadequately recognised. The error of fixing the attention upon one morbid state or one prominent clinical symptom is very general, and to immature minds and unskilled observers is practically irresistible; but we all need occasional reminders that there are no hard-and-fast lines in nature, and that the elaborate classifications and hard-and-fast distinctions so usual in text-books, though often practically useful, give an erroneous impression of a fixity and precision which as a matter of fact do not exist. Disease is not mathematical or mechanical. It is fluid, mobile, easily passing from one transition to another, incapable of precise definition, obeying general laws and definite principles, but not to be confined within the limits of rigid rules or unvarying formulæ. Specialism in medicine is always open to the reproach that disease refuses to recognise the limits of the specialist's domain. Dr. ROBERTS wishes to utter "an emphatic protest against the absurd development of specialism in relation to this region—i.e., the chest—which at the present day is working so much mischief"; and he gives it as his opinion that "the practice of dealing with each thoracic organ as if it were entirely separate and distinct, or, still more, of making a

speciality of different complaints, is both dangerous and absurd." It is evident, we think, that any attempt to study pulmonary disease apart from morbid conditions of the heart must be doomed to failure; and to this extent, at all events, we entirely concur in Dr. ROBERTS'S *caveat* against excessive specialism. But we must beware of running from one extreme to another.

After a passing notice of the importance of conditions of the chest wall and diaphragm Dr. ROBERTS proceeds to discuss a group of cases characterised by a combination of conditions difficult to define, but of great practical importance. "In these cases the superficial structures are more or less wasted, it may be considerably; the chest walls are obviously rigid; localised pleuritic adhesions can be made out, it may be in several spots; there are no gross lesions to be detected in the lungs, but these organs are evidently wanting in normal elasticity and tending towards degeneration, perhaps also exhibiting limited areas of emphysema, or there is a suspicion of a fibrotic change here or there; sometimes there are indications of commencing atheroma of the aorta, or the heart is feeble in its action and is probably of actually small size." Everyone is familiar with these cases which, as the lecturer says, do not belong to the chronic emphysematous or phthisical groups, and are often, for want of a better title, simply labeled cases of "weak chest." The important practical point about such cases is that they do well by using suitable precautions and having an occasional change of climate; but that even a slight bronchial attack is a serious matter for them and that they die readily from pneumonia or other grave acute affection. The prognosis and treatment of such cases require to be regulated by a due recognition of the fact that symptoms trivial in themselves acquire a serious gravity when viewed in relation to this peculiar type of patient. Dr. ROBERTS protests against the crude and superficial way in which many of the laity talk of phthisis, as if the mere recognition of the bacillus explained everything. He points out the absolute necessity of recognising the numerous grave organic changes wrought by the disease, such as consolidations, tuberculous, inflammatory, caseous, or mixed; miliary tubercles, diffused or in groups; softening of these structures; cavities, reparative changes, the formation of fibroid tissue, bronchial inflammation, compensatory emphysema, and the like. Cases of chronic pneumonia, in whatever way arising, "in time assume a decidedly complex character. The fibroid change is limited in most cases mainly or entirely to one lung, or a portion of it, which is thus hardened and contracted, the involved structures being rendered quite useless; it is also often accompanied with the remains of phthisical cavities, and still more frequently with dilated bronchi, while unaffected areas of the same lung, as well as the opposite one, become the seat of compensatory distension, which may ultimately terminate in true emphysema. ..... There is an exceptional class of chronic pneumonic cases which may prove very puzzling. In these one lung is absolutely solid, either throughout or over a large extent, but instead of being contracted it is more or less enlarged. The opposite lung becomes greatly distended, and also in some instances the seat of dry bronchial catarrh; so that the general aspect of the patient, as well as the prominent symptoms may resemble closely at first sight those of an extreme case of emphysema and bronchitis, with an asthmatic tendency."

Asthma and angina pectoris afford Dr. ROBERTS good instances of the necessity of a comprehensive view of chest ailments. In a large majority of cases asthma "supervenes upon distinct and obvious morbid changes associated with the chest, which tend to become more and more pronounced as the case progresses. The cases in which asthma occurs are usually more or less of the emphysematous and bronchitic type; but rigidity of the chest walls, adhesion of the upper part of the lung, and other factors are often of much importance in these cases in relation to asthmatic attacks." Angina pectoris "usually complicates more or less definite morbid conditions of an organic nature. ..... Those which are most likely to be overlooked are atheroma or calcification of the aorta and coronary arteries, and cardiac degeneration not of a pronounced character." Dr. ROBERTS'S concluding remarks on the treatment and general management of combined chest cases are wise and judicious, but do not present any novelty. He is emphatic on the importance of recognising what may fairly be expected from treatment and what it is folly to attempt; on the necessity of wisely adapting our measures to acute conditions supervening on chronic; on the need for grappling promptly with grave conditions readily amenable to treatment—e.g., effusions into serous cavities; on the value of rest and the simpler drugs; on the impolicy of fussy therapeutics and routine symptomatic treatment; and on the wisdom of being on our guard in relation to new "cures" and vaunted specifics.

It is, we think, impossible to read these lectures without a heightened sense of the complexity of many chest cases, and the absolute necessity of viewing them in all their bearings and relationships before venturing upon either prognosis or treatment.

WE have frequently called attention to a subject which recent occurrences in India have again forced upon our notice—viz., the very serious amount of inefficiency caused in the European army of that country by the prevalence of a certain class of diseases. The Commander-in-Chief in India, speaking quite recently on the Cantonments Acts Amendment Bill in the Legislative Council at Calcutta, said that practically 50 per cent. of the strength of the army were admitted into hospital in the year 1893 for these diseases, and that he believed the record for 1894 would be found to be worse. There cannot be any doubt, therefore, about the extent of the evil. The Commander-in-Chief added that neither personally nor as representing the army was he in favour of the removal of what he believed to be most useful restrictions; but he considered that it was his duty to support the mandate of the House of Commons, however much he differed from the policy enforced. We have no sympathy with that class of people who, persistently shutting their eyes to the magnitude of the evil, have fanatically opposed every attempt to check or limit its spread by legislative means. We set aside the question of whether these attempts, either in this country or India, practically effected their purpose, as this touches upon contentious matter about which there may be room for difference

of opinion. For the moment we confine ourselves to the question of the principle involved. We hold that it is the duty of the State to do all in its power to check and mitigate the evil, for the same reason and on exactly the same grounds that the State recognises the dangerous nature of other contagious disorders and tries by every means in its power to check the spread of such a disease as small-pox, for example. We cannot shut our eyes to a fact that we encounter in the history of every past civilisation, and can any day see with our eyes in the streets of any city and large community at the present time. Prostitution forms a trade or calling which, under certain conditions, is a most dangerous one to the community at large. The results are not simply restricted to those who, by yielding to temptation, expose themselves to the risk of infection, but perfectly innocent and unoffending people in this respect are notoriously frequently involved in the consequences. In order to safeguard the public health against accident or injury we do not hesitate to impose laws and restrictions in the matter of dangerous trades and infectious diseases. The world cannot be governed on abstract principles of right and wrong without reference to the constitution and frailties of human nature; the conditions of society as it exists now, and probably always will as long as human nature remains what it is, must be taken into account. It seems to us ridiculous to characterise measures for the limitation of the spread of contagious disease as State regulation of vice, for they are nothing of the sort. Whether the measures that had been adopted have succeeded or failed, been adequate or inadequate for the end in view, the practical tendency of them was, it seems to us, to check indecency and open prostitution, to deter young, vain, and thoughtless girls from being led away by temptation and dissipation from fear of being discovered, and by affording succour and aid to those "unfortunates" who were diseased it placed them under conditions favourable to the access of kindness and moral influences, and in that way added to their chances of abandoning their mode of life. All this appears to us to be the very reverse of a State regulation of vice. With regard to the means by which the spread of venereal diseases can be checked, the question is admittedly one of great practical difficulty. The Contagious Diseases Acts hospital system in this country and the Cantonment Act system in India have not, it is urged, as a matter of statistics and experience, been productive of all the good that was anticipated; but that does not at all prove that they were inherently wrong. It only shows that they were inadequate to effect all they were intended to do. There are many reasons why this should have been so into which it is needless to enter now. Of one thing there can be no doubt — namely, that according to official returns the inefficiency in the army in India from these causes has greatly increased of late. The extensive prevalence of these diseases is a very serious matter, the consideration of which, however much it may be put off for the present, must ultimately compel attention. The voluntary lock hospital system is evidently not calculated by itself to effect much good, and sooner or later some additional practical means will have to be devised for dealing with this subject, based presumably upon the principle that those who are known to be suffering from a highly contagious disease should not be allowed to follow a vocation which endangers all those with whom they consort. In the present state of the political temper any attempt of the kind would be but "ploughing the sand of the seashore," but we have confidence in time, reason, and common sense.

IT may or may not be a matter for regret that the question of London's future water-supply will have brought to bear upon it the influence of party differences of opinion; it is, at any rate, not a question that will admit of precipitate action. The subject, especially in regard to increasing the supply and to the municipal acquirement of the existing undertakings, is being pressed home upon us at the present moment with a zeal which possibly exceeds wisdom, and which may possibly also be lacking the ballast which is the *sine quâ non* of sound and healthy legislation. On the one hand, the London County Council have decided to apply for powers for obtaining additional supplies. Their case is that the scheme of a system of storage reservoirs, coupled with the proposal to abstract large additional quantities of water from the rivers, is not the proper method of meeting the future wants of London, and that any further capital expenditure on works in the Thames and Lea valleys should be regarded as of a temporary character, and should be restricted to such improvements as may be for the time indispensable; and finally, that the true solution of the problem is the obtaining of the necessary additional supplies from a purer source. On the other hand, there are the conclusions of the Royal Commission of 1892, which, seeing that they were based upon the evidence of leading experts in the engineering, geological, bacteriological, and chemical sciences, and upon the evidence of experience, cannot be ignored. On the question of the desirability of the acquirement and management by the municipal authorities of the supply of the "first necessity of life" there can be no divergence of opinion. The lesson taught on this head by the experience of Birmingham, Glasgow, and other large towns is conclusive. It may not follow, however, that the practical administration of water distribution will be any better for municipal control, except in so far as it will be influenced by public opinion; whereas at present the consumer is left largely dependent upon the resources and decision of private bodies. We know even in these days that although such matters of importance as highway maintenance, street lighting, and the removal of dust are in the hands of public authorities, yet in some cases their administration has fallen short of what the public have required in regard to comfort and even to health. It is, however, most probably the question as to what will constitute fair and reasonable terms for the acquirement of the present companies' undertakings which will give rise to the widest dispute and dissension, and which will be the chief source of delay before the transference of the water administration to the municipality becomes an accomplished fact. It is clearly a matter for arbitration which ought to be perfectly fair and open, and in which all the points in favour of either side should be considered by the arbitrators so that they may give both for seller and buyer a reliable and fair estimate.

What this estimate may be it is, of course, impossible to judge; but, even assuming that it is likely to be favourable to the purchaser—i.e., the public—it must necessarily mean a heavy impost upon the rates for some time to come. It will involve, according to the County Council's own estimate, a certain expenditure of £33,000,000, and when to this is added their proposal to obtain a fresh supply from Wales at an additional estimated cost of £20,000,000 the London ratepayer may well take breath. He may reasonably ask, Is the enormity of the proposed scheme consistent with our present needs, or is this gigantic financial undertaking an immediately necessary step? The conclusions of the Royal Commission, to which we have already referred, would reply distinctly in the negative, and the reports issued from time to time in the annual Blue-book of the Local Government Board by General SCOTT in regard to supply, and by Professor FRANKLAND in regard to quality, have to some extent anticipated these conclusions. The report of the last official year (1892-93) has been recently published, and the section relating to water-supply is dealt with in another column of our present issue, from which it will be seen that both the adequacy and the efficient purity of the supply are maintained according to the opinion of these experts.

The Royal Commissioners calculated that the present resources, aided by increased storage, would be sufficient "to supply thirty-five gallons a head to a population of 12,000,000, which is about 750,000 in excess of what the total population of Greater London, together with the outlying parts of water London, will have become in 1931 even if the ratio of increase in the decennial period from 1881 to 1891 is fully maintained." The conclusions as to its fitness for drinking purposes are couched in equally optimistic terms. Thus they say: "Having regard to the experience of London during the last thirty years and to the evidence given to us on the subject (which includes 'the unanimous testimony of medical officers of health, water analysts, bacteriological experts, and others'), we do not believe that any danger exists of the spread of disease by the use of this water, provided that the water is *efficiently filtered* before delivery to the consumers." (The italics are ours.) That we do not go so far as to accept unreservedly the conclusions of this report may be gathered from an article on this subject in THE LANCET of March 10th and 24th, 1894, in which we traversed several vital points; but we may reasonably submit that the conclusions to which the Royal Commission came after a most careful, laborious, and prolonged inquiry deserve very serious deliberation before we are asked to embark upon an enterprise the avowed aim of which is admirable, but the immediate necessity of which seems to us to require further evidence. In the meantime we may urge again, as we have urged before, that, inasmuch as the purity of the present supply depends most seriously upon the efficiency of filtration, it is extremely desirable that provision should be made with not a moment's delay for an administration to fully secure and maintain such efficiency. In regard, however, to the powers which the County Council are seeking from Parliament, we doubt not the benefits of the scheme; but have the financial effects been really seriously considered?

Annotations.

"Ne quid nimis."

FEVER AND SMALL-POX HOSPITALS.

OUR issue of last week contains a letter from Dr. C. E. Matthews, who takes exception to our comments in a leading article, published in THE LANCET of Feb. 16th, on the subject of "Fever and Small-pox Hospitals." Dr. Matthews begins by stating that we express disagreement with those who seek to limit the power of diffusion of small-pox. We are not aware that we have done so. All we did was to point out that the evidence on which Dr. Matthews based his views as to a definite limit was not such as to warrant his conclusion. To quote Dr. Matthews' own words, he has laid it down that "the extreme limit of diffusibility" of the small-pox infection is "1000 ft." This is based on the negative evidence that whilst 1563 small-pox patients passed through his hospital in certain months of 1893, the inmates of a fever hospital and of the Darenth Asylum and schools, situated "about 1000 ft." distant, did not contract small-pox. We indicated that two points at least having an all-important bearing on the question had been ignored. One was the condition of the "school inmates" as to vaccination. Dr. Matthews answers that the inmates of "the institutions" referred to—three in number—were on about the same footing as regards protection from small-pox as the general public. But the speciality of "school inmates" is again ignored. The inmates of public schools are generally protected by vaccination to a degree of efficiency altogether unknown as regards the general public, and, being largely composed of young children, they afford a double test by reason of age, which is altogether special to them. If they are unvaccinated they fall an exceptionally easy prey to small-pox; if vaccinated they have had the benefit of the comparatively recent operation and, as the Registrar-General has shown, of a protection against that disease which is also altogether exceptional. Dr. Matthews wonders that we ask as to the vaccination of the school children, and yet he made it a point in his report to tell us of the fever patients, who likewise escaped, that "special precautions" were taken to transfer from London "only patients who showed evidence of previous vaccination." The fact that special precautions in the selection of these patients were deemed necessary indicates pretty well that the managers and their advisers were not content to put to the test the amount of protection against small-pox possessed by "the general public." The next point which we set out as having an important bearing on the case was the stage at which the small-pox patients arrived in the hospital, and we emphasised the fact that Dr. Matthews said nothing as to the proportion of convalescents to total small-pox patients. We had very good reason for indicating this further flaw in his evidence. In the first place, there is a very general conviction that it is acute cases of small-pox, and not convalescents, that give rise to the diffusion of the infection from the hospitals in which the patients are aggregated. Secondly, in the celebrated Fulham case, which was thrashed out before a Royal Commission, it was shown that, notwithstanding the admission of large numbers of convalescent small-pox patients, there was no evidence of the diffusion of the infection to houses around; whereas directly the admission of acute cases commenced there were "manifestations of excessive small-pox in the neighbourhood." And thirdly, we noticed that Dr. Matthews himself took pains to explain in his report that from June 29th, when the Lower Hospital was opened for the fever patients, the hospital as a whole "was used simultaneously for the reception

of *convalescent* small-pox and fever patients." (The italics are ours). He also pointed out that of the 1563 small-pox patients in question no less than 1552 were transferred from the hospital ships to his hospital, and he emphasises the peculiarity of his patients by pointing out that they had a fatality-rate of 0·32, or only $\frac{1}{11}$th of that for the ordinary small-pox patients in the ships, including deaths at "the *convalescent* hospital." Why Dr. Matthews should, therefore, now tell us that the argument as to convalescence is "simply a begging of the question" we cannot understand. Under any circumstances we trust that we have answered Dr. Matthews when he asks, Why should the "question of vaccination and convalescence be used as arguments" in the matter? and that we have shown that the points to which we have adverted are of such importance as probably to govern the whole question at issue. So long as we have so much positive evidence in exactly the opposite direction we cannot accept a single instance of negative evidence and incomplete data as affording "sufficient evidence ..... for assuming that the diffusion of small-pox through the air does not extend to a distance of 1000 ft."

PAYING PATIENTS AT THE GREAT NORTHERN CENTRAL HOSPITAL.

THE question of paying patients in general hospitals was distinctly advanced by the discussion at the annual meeting of the governors of the Great Northern Central Hospital, a report of which is published in another column of our present issue. Dr. Glover's motion—condemning the system adopted under which paying patients are attended gratuitously by the honorary staff and asserting that our voluntary hospitals are meant essentially for those who cannot pay—was not, indeed, carried, but it was significantly supported by independent governors and by the whole of the honorary staff that were present. It is understood that a very importunate canvass had been made by the committee, who only got 7 votes more than were given for Dr. Glover's motion. A motion by Mr. Burdett to throw the wards open to paying patients who might be attended by their own medical men received only 2 votes—those of the proposer, and the seconder, Dr. Potter. It was resented, too, rather warmly by the treasurer. The two points insisted on by Dr. Glover are unanswerable—first, that the hospital with its 155 beds is practically the only hospital in the midst of a population of between 300,000 and 400,000, and is too small for the demand of the classes for whom hospitals exist; and that therefore the appropriation of beds under such circumstances for patients who can pay or whose friends can pay for them is calculated to discourage subscriptions. The second point was that there was no precedent in any general hospital in London for placing paying patients on gratuitous terms under the care of the honorary staff. Mr. Burdett said that this was contradicted by the case quoted by Dr. Glover from THE LANCET of last week, in which a lady had been admitted into the wards of the Hospital for Women, Soho-square, to be attended by the honorary staff for a guinea a week against the testimony of her medical man. Though the committee have secured a majority at the annual meeting in favour of their new-fangled system, they cannot fail to see that it is distasteful to many of their subscribers and to their own honorary staff. It represents a new departure—an attempt to cater for another class than that for which hospitals exist. It will be time enough to undertake this new kind of business when they have met the wants of the really poor. It is pleasant to be able to say that in other respects the hospital is well managed and worthy of the support of charitable persons. In the out-patient department the numbers for 1894 were 25,083, being 1207 less than in the previous year. No doubt many were included in this number who should not be hospital patients at all, but the reduction shows that the inquiry system in force has some effect.

EXPOSING AN INFECTIOUS PERSON IN THE STREETS.

AT Bow-street Police-court on Tuesday, Feb. 26th, Mr. W. E. Taylor of Kilburn was summoned before Mr. Vaughan by Dr. Allan, medical officer of health for the Strand district, to answer a complaint that, contrary to the provisions of the Public Health (London) Act, Sec. 68 (*b*), he had caused his servant while suffering from scarlet fever to walk from Kilburn to the office of the Metropolitan Asylums Board in Norfolk-street, Strand, on the evening of Saturday, Feb. 16th. After hearing the evidence of a clerk in the employ of the Asylums Board, who was in charge of the office when Mr. Taylor arrived with his servant, and of Dr. Stewart, of the South-Western Fever Hospital, the magistrate found the charge proved and inflicted a penalty of 40*s.* and costs.

OUR "GIDEON GRAYS."

THE rural practitioner's lot is, as we all know, a stern and, so far as emolument goes, a very inadequately rewarded one; but certainly he has his *revanche* at the hands of our best men of letters. In the few strokes of a master Sir Walter Scott introduces us to the country medical practitioner, than whom "no creature works harder or is more poorly requited, unless, perhaps, it may be his horse"—the type of a class "from whom," he adds, "Scotland reaps more benefit and to whom she is, perhaps, more ungrateful than to any other class of men, excepting her schoolmasters." Since "Gideon Gray" the world has had many portraits of the sagacious, skilful, self-reliant, courageous, and nobly philanthropic rural practitioner—none, however, that come so near that master-work as the "William Maclure" of the Rev. John Watson ("Ian Maclaren"). In a little volume of sketches of Scottish country life, a volume which in a few weeks has had a circulation of nearly 30,000 copies, he gives a series of singularly graphic pictures of the daily and nightly experience of this "doctor of the old school," and with true artistic instinct chooses the episodes which bring the virtues of the class most vividly into play. For dramatic power there are fewer finer situations in fiction than the night journey through the flood undertaken by Maclure and the eminent surgeon from Glasgow to perform laparotomy on a poor peasant woman, for whom a less scantily provided neighbour had subscribed to procure the intervention of the great expert. "Four times," we read, "they left the road and took their way over fields, twice they forced a passage through a slap in a dyke, thrice they used gaps in the paling which Maclure had made on his downward journey," until they reached the winter-swollen Tochty. "With the first plunge into the bed of the stream the water rose to the axles, and then it crept up to the shafts, so that Sir George [the surgeon, a fine character sketch of the late Sir G. B. Macleod of Glasgow] could feel it lapping in about his feet, while the dogcart began to quiver, and it seemed as if it was to be carried away by the mass of black water racing past beneath." The passage once made, thanks to Maclure's sturdy mare Jess, the cottage is reached and, not a minute too soon, the operation is begun, with a head imperturbed and a hand unshaken by the series of hair-breadth escapes just effected. The successful result and the noble generosity of Macleod, seconding that of Maclure, in the matter of the fee are told with a simple directness that implies a knowledge of similar occurrences in real life. Then, again, in illustration of the humour that coexists with his humanity and aids the practitioner in reconciling himself to his

stern lot, we would place Maclure's observations on the homœopathic medicine chest beside the most caustic remarks of Bailie Nicol Jarvie or Richie Moniplies. The doctor has been summoned by a dapper, self-sufficient stranger to attend his boy labouring under surfeit-colic, and has lost much valuable time in obeying the trivial call. "You see, Dr. Maclure," says the parental Hopps, "we're homœopathists, and I have my little chest here." "Let's see it"; and Maclure takes out the little bottles and reads the names. "Belladonna; did ye ever hear the like? Aconite; it covers a'. Nux vomica! What next? Weel, my mannie," he says to Hopps, "it's a fine ploy, and ye'll better gang on wi' the nux till it's dune, and gie him ony ither o' the sweeties he fancies." The character sketch of Maclure, however, culminates in the closing chapter, entitled "The Doctor's Last Journey," which for power and pathos surpasses anything recently given forth by the Scottish school of fiction. There is nothing in Barrie or Crockett to equal it, and the deathbed scene with the good doctor's incoherent wanderings back to his patients and to the more trying episodes of his dramatic career cannot be read with dry eyes. Such tributes as this of Mr. Watson to the heroism and nobility of which our "Gideon Grays" are the exemplars go far to compensate us for the unworthy success of "My Novel," in which the practitioner Squills is made ridiculous by his want of Latin, or for the more unworthy satire of "In a Children's Hospital" of the late Poet Laureate. The world is not slow to sift the grain from the chaff in contemporary literature, and apportions their respective places to the author who can recognise true merit under external roughness, and to him, on the other hand, who is so impressed by the shagginess of the outer coat as to have no thought for the noble heart that beats under it.

ELECTROCUTION.

IN connexion with the process of killing criminals by means of electricity—"electrocution"—our American brethren are becoming alive to the fact that a shock, or series of shocks, given to a man or an animal may produce all the appearances of death without actually causing death—that is to say, the animal may lie insensible for a time and yet recover. Hence the possibility that a criminal executed by the electrical discharge might not be killed, but might only be stunned by the shock administered. This fact seems to have been considered as a novelty on the other side of the Atlantic. Here it is a piece of information that has for a long time past been understood. It has been observed that persons stricken by lightning, and apparently dead, have recovered during bloodletting, and it is a well-known fact that some years ago a large dog was struck down with an electric shock derived from a Franklin battery in cascade; an operation was performed upon it while it was unconscious and apparently dead, and it afterwards made a good and rapid recovery—an illustration of a painless operation with electricity as a mode of producing anæsthesia. It is also known that the observer who recorded the above, in using electricity as a means for killing animals intended for food, saw so many signs of recovery from the stroke after what at first seemed to be death that he abandoned the use of electricity for the object he had in view. Of course, a mistake arising from this circumstance and occurring in a human subject condemned to death would be amongst the most calamitous brutalities even an uncivilised community could be guilty of. It might lead practically to burying a man alive. Dr. Gibbons, an American writer who does not appear to have studied the experiments that have been made in this country, has been making research on the matter, and has actually come to the conclusion "that more murderers have paid the penalty for their misdeeds on the dissecting-table than in the electric chair." He considers that a murderer named Taylor, who was presumed to be executed by electricity, was alive when supposed to be dead, and adds that "during my years of practice I have had three cases of persons struck by lightning who were supposed to be dead. They showed all the symptoms of death. They were entirely unconscious, and the accepted signs of life were suspended; yet they revived." It is said also that he—Gibbons—gave a convict named Wilson the offer that he would be present at his execution, and that after the convict had suffered the penalty of the law in the electric chair he would make an attempt to bring him back to life; but the convict demurred, on the ground that he would not care to expiate his offence a second time in the event of the complete success of the resuscitation—a very natural demurrer. The questions here considered have excited a singular inquiry in America. It has been asked, If a man is sentenced to death by the electric chair, and after the current has been applied the medical man in attendance pronounces him dead, should his friends revive him through any method, does he regain his liberty, must he serve the rest of his time in prison, or, we would ask, must he be executed again? The answer to this question by the *New York Sun*, as quoted by the *New York Medical Journal* of Feb. 16th, is as follows: "The execution under the present law in this State is not completed until the doctors have performed a necropsy. In other words, the doctors are executioners. After they have cut up the criminal there is no doubt about his being dead." "This has an ugly sound," says our medical contemporary, "but who can demonstrate that the *Sun* is wrong?" We agree with our contemporary to a certain extent, for it would certainly be very wrong if members of our profession, engaged naturally and honourably in the art of saving life, were brought to be employed as the final executioners by the work of the scalpel on the dissecting-room table. It is time that the whole profession of America should raise its voice against a possibility so awful, so dangerous to civilisation in general, and to one of the noblest professions in particular.

CONVICTIONS FOR DRUNKENNESS.

UNDER the title, "Drunkenness (England and Wales)," a return has just been issued by the Home Office showing the number of convictions for offences under the several enactments against drunkenness committed in England and Wales during the year 1893. The aggregate number of these convictions shown in the return is 153,072, being in the proportion of 5 per 1000 of the population of England and Wales enumerated in 1891. It should be noted, however, that there are blank returns for the three boroughs of Newcastle-upon-Tyne, Barnstaple, and Carmarthen; no explanation of this omission is given in the return, although it appears impossible to assume that no conviction for drunkenness occurred during the year in any of these towns. It is well to bear in mind that local convictions for drunkenness do not necessarily bear any constant relation to the local prevalence of drunkenness, since police regulations and their administration, and even the action of magistrates, vary widely in different localities. It may, at the same time, not be without interest to point out the extremely wide variations between the proportions of these convictions in different parts of England and Wales. It may first be noted that while the convictions were equal to 5 per 1000 of the population in England, they were 7 per 1000 in Wales. Speaking generally, the main excess of convictions both in England and Wales occurred in the towns, and was not by any means invariably greatest in the largest towns. In the most thoroughly rural counties, such as Bedford, Berks, Buckingham, Cambridge, Essex, Hertford, Huntingdon,

Oxford, Somerset, Suffolk, Norfolk, Sussex, Westmorland, and Wilts, the convictions did not number 3 per 1000, and were in many cases under 2 per 1000. The county of Salop, also mainly rural, forms, however, a striking exception, as the proportion of convictions was 7 per 1000, and equal to the proportion in Wales, where the high rate appears to be due to the prevalence of drunkenness among the miners of South Wales, as the rate among the population of nearly half a million in Glamorganshire was no less than 12 per 1000, while in North Wales the proportion did not exceed 5 per 1000. When we come to examine the returns from the various boroughs and to calculate the proportions of convictions to the population, it is impossible not to be startled at the extent of the differences and to wonder whether these proportions give any real indications of the varying proportions of prevalent drunkenness, and if so, how such local variations are to be explained. The proportion of convictions was under 1 per 1000 in Norwich and Coventry, and under 2 per 1000 in Bradford, Colchester, Peterborough, Tiverton, Banbury, and Winchester. Within the Metropolitan Police District, having a population of more than 5,500,000, the convictions averaged 5 per 1000; while the proportions in the other largest towns were Liverpool, 14; Manchester and Salford, 11; Leeds, 4; Sheffield, 3; Bristol, 5; Leicester, 4; Nottingham, 5; and Sunderland, 7. The county of Durham shows among the miners a similar excess to that noticed in the case of Glamorganshire, the proportion being 14 per 1000, while in Hartlepool it was 15, and in the city of Durham 16. Among the smaller towns the following excessive proportions may be noted: Blackpool, 12; Bath, 11; Wakefield, 10; Berwick-upon-Tweed, 12; Grimsby, 11; and Tynemouth, 28. Exceptional mention should be made of Newcastle-under-Lyme, which is debited in the return with 4758 convictions in a population of only 18,452, equal to 264 convictions per 1000 of the population, a proportion fifty-three times greater than the mean proportion in England and Wales. If this remarkable record of convicted drunkenness is not the result of a misprint it would be interesting to have some other explanation of the startling figures.

DEATH UNDER CHLOROFORM.

A DEATH under chloroform occurred recently at St. Bartholomew's Hospital. We have been favoured with the following particulars by the house-surgeon in charge of the case. The patient, a man aged forty-three, but looking much older, was admitted into St. Bartholomew's Hospital on Jan. 23rd for treatment of retention of urine caused by a stricture of the urethra. His general condition was bad; he had phthisis, both apices being affected. To pass a catheter it became necessary to anæsthetise the patient. Ether being contra-indicated by the condition of his lungs, chloroform was selected as being the best anæsthetic for the case. He took the chloroform badly, coughing and struggling a good deal. These complications rendered it difficult to keep the patient fully under the anæsthetic, but beyond these circumstances nothing occurred, and no really alarming symptoms were present. During the ensuing week the patient's condition remained very unsatisfactory, his temperature ranging at night to 102° or 103° F. On Feb. 1st, further operative measures being deemed advisable, chloroform was again required. The anæsthetic was given on lint, half a drachm being poured on it from time to time. The lint was held about four inches from the face and approximated by degrees. The struggling stage was again severe and prolonged, and, to avoid too much vapour being inhaled, the lint was repeatedly removed from the face. In about ten minutes from the commencement of the inhalation, about three drachms and a half of chloroform having been poured upon the lint and the patient apparently just "going under," the temporal pulse suddenly failed and the patient grew pale. Respiration continued quite regularly. No radial pulse was to be felt nor was the precordial beat perceptible. The breathing remained regular for some two minutes, when it grew slow and laboured. The pupil of the left eye never dilated (the right eye was affected with old iritis). The usual restorative measures failed to save the patient. The necropsy showed extreme fatty degeneration of the myocardium. Tubercle existed in the lungs and kidneys. The careful report before us seems to indicate that this patient died from cardiac failure, no doubt determined by the depressing effect upon the heart of the prolonged struggling and the anæsthetic. The influence of dyspnœa and the cough—i.e., violent expiratory effects upon a fatty and therefore weakened heart—can readily be gauged, even without the primary depression of circulation usual under chloroform, and these appear to have been the factors at work in this case.

REPORTERS IN HOSPITAL WARDS.

THE daily newspapers in Brussels having from time to time published accounts of hospital cases supplied to them by reporters who in their search for copy had managed to get into the wards and operating theatres, mingling with the students and hearing the remarks of the professor, a strong feeling has been aroused in professional circles that some steps should be taken to put a stop to unauthorised communications of this kind appearing in the lay press. A meeting was therefore held a short time ago of the members of the various hospital staffs, under the presidency of M. van Schoor, at which it was resolved that all non-medical persons should be forbidden to go round the wards with the physicians or surgeons. One of the speakers remarked that he had already frequently turned reporters out of his wards, that one must have the courage to do so always and to turn a deaf ear to their requests for information, and that he had, moreover, intimated to such of his students as were in the habit of adding to their resources by writing for the papers that if ever they dragged his name before the public he would take very good care that they should no longer have the privileges of medical students.

THE HISTORIC WINTERS OF EUROPE.

FOR the duration and severity of its wintry weather the year now passing stands out as an *annus mirabilis*. Among its predecessors similarly notable was 1402, when the Venetian lagoons were frozen over for many weeks, and 1441, when Lionel d'Este entertained on the frozen Po a numerous company of banqueters. In 1493 not only the Venetian lagoons, but the port of Genoa, were one mass of solid ice—a state of things repeated in 1503, when Marseilles Harbour was also frozen. In 1594–95 the Mediterranean was frozen at Marseilles, and the Adriatic at Venice, and on Jan. 23rd and 24th, 1665, the Arno at Florence was a racecourse bearing not only the competitors, but innumerable spectators. In 1657–58 nearly all the Italian rivers were floored with ice, and Rome was well-nigh buried under snow, while in Sweden King Charles X. crossed the Little Belt on foot at the head of 20,000 soldiers, though at the close of the march the ice gave way and some squadrons of cavalry perished. The winter of 1705 was terribly severe, as was also that of 1709—the year of the battle of Poltawa, when for three months all the European rivers were frozen over, as well as those of North America, and at Paris the thermometer sank to 23° below zero. In 1740 there was constructed at St. Petersburg a vast ice palace, in front of which was planted a park of artillery made of ice which, charged with shot, pierced at sixty paces an axis of 54 millimetres. In 1776–77 all the Italian rivers were frozen—a state of things repeated with still more severity in

1783–89, when the deepest lakes were floored with thick ice, and the temperature from the south to the north of Europe descended from 20° to 40° below zero. Again, in 1794–95 the French cavalry, by a brilliant operation on the frozen Texel, captured the Dutch fleet. Similarly severe was 1798–99, the thermometer registering 17° below zero at Lodi. The winter of Napoleon's retreat from Moscow was an *annus mirabilis* for rigour; that of 1819–20 was remarkable for many successive weeks of unbroken frost, as was also that of 1829–30, so disastrous to agriculture. In the Alta Italia in 1844–45 sentinels on duty were frozen at their posts, while hardly less painfully memorable were 1849–50, 1853–54, and 1867–68. Few can have forgotten the terrible winter of 1870–71, from which all Europe suffered, notably the troops besieging and defending Paris. Long and rigorous was the frost of 1879–80—the thermometer marking at Piacenza 18° below zero. Very heavy and persistent snowfall characterised 1887–88, while between that and the present the most severe winter was undoubtedly that of 1890–91.

THE VALUE OF BACTERIOLOGICAL EXAMINATIONS IN DIPHTHERIA.

DR. THRESH in his annual report for 1894, which we hope to notice more fully later, draws attention to the danger of placing too much reliance upon the negative results of bacteriological examination in diphtheria. Although, as Dr. Thresh observes, the discovery of the diphtheritic bacilli is sufficient to establish the diagnosis, their non-discovery does not justify the declaration of the case from which the membrane or secretion was taken as not diphtheria. We have already drawn attention to this question in the columns of THE LANCET, and we are glad to see that Dr. Thresh has also been led, as a result of his experience, towards the same conclusion. As he remarks, the utility of this method of diagnosis is limited, as the examination of the throat may at one time show no bacilli, while at another some may be detected. The result, no doubt, depends in a measure upon the manipulative skill possessed by the observer who procures the specimen, but certainly it appears to us that negative evidence should only be acted upon after repeated examinations. To say this, however, is equivalent to depreciating in some degree the value of the method from the standpoint of the diagnostician, inasmuch as a busy practitioner can but ill afford the time necessary for collecting and despatching specimens of membrane. These remarks, however, in nowise militate against the great value of positive results or the importance of repeated bacteriological examination where practicable.

"PHRENOSIS PELLAGRÆ."

IN medico-psychological classification this term is peculiar to Italy, as the thing signified is almost exclusively Italian. It signifies the mental degeneration due to pellagra, that erythematous affection so common in the delta of the Po and due to the consumption of unsound maize. Hebetude resulting in absolute dementia represents the initiatory and the closing symptoms of the malady, though there are cases in which hallucination, prompting to eccentric and even violent, not to say lethal, acts, is the outcome of the progressive degeneration of the sensorium. A grave recrudescence of this disease is reported from Rovigo, and the Italian Government is actively subsidising the provincial council in combating it on the one hand and adopting prophylactic measures on the other. The houses in which the victims to the "frenosi pellagrosa" are under treatment are being reinforced in *personnel* and in the alimentary as well as therapeutic means of cure; while all the syndics (mayors) of the towns have received an official circular indicating the hygienic, and especially the dietetic, *régime* to be applied to the peasantry of the affected or threatened districts. "Locande sanitarie" (sanitary stations) are established at the more severely visited centres, amply provided with wholesome, sustaining food, and in addition to these the "cucine economiche" (cheap kitchens) are open to all who can afford to avail themselves of the same, or to whom the charitably disposed have furnished tickets admitting to them. The water-supply—an important factor in combating pellagra, particularly in the marshy levels of the Polesine—is being attended to in the communes, and the dwellings of the labourers ("case coloniche") are periodically inspected and put in order. All this, be it noted, is inspired by the exacerbation of a malady epidemic in that region, an illustrates once more the fatal policy of so many southern provinces in waiting till the enemy is attacking in force instead of forestalling him by carrying the war into his camp.

SELF POISONING.

MAX NORDAU in his interesting work "Degeneration," says that the poisoning of civilised peoples continues to increase. He is referring chiefly to alcohol and tobacco; but, as a correspondent reminds us in a letter which will be found in another column, there is a widespread and dangerous tendency among the public, especially during an epidemic like the present, to fly to the indiscriminate use of drugs. We are sorry to see in a lay contemporary a summary of treatment, not only hygienic but therapeutical, culled from various sources. Dover's powder and salicylate of soda are mentioned, and no doubt these are valuable drugs when employed under medical supervision; but we wonder how many people after reading the article we refer to will take either or both on their own responsibility, possibly with serious results. Our object is not to deprecate therapeutic medication, but only to warn the average citizen that if he thinks he has influenza he should call in his medical man to prescribe for him and not dose himself. Dover's powder is poison, and the responsibility assumed by our contemporary in recommending to its numerous readers the use of the powder indiscriminately is very considerable. Another paper enjoying a well-deserved reputation has published the recipes of three London physicians against influenza. No doubt this was well meant; but it would have been, had the recipes been correctly given, a dangerous inducement to mischievous self-drugging. As the doses, however, are all wrong the advice gratis may prove especially pernicious.

THE PURIFICATION OF THE AIR BY SNOW.

AFTER the hardships we have endured through the late severe frost—which we trust is now a matter of history, though its demise would appear to be slow—it is pleasant to reflect that in some respects possibly there were influences for good at work. Thus, it seems that the snow which fell during the severe season was characterised by an unusual porosity and a regularity of crystalline form, indicating its formation in a calm atmosphere, which endowed it with distinct purifying powers upon the air through which it descended. That the imprisonment of suspended impurities in the air in the pores of the falling snow takes place is clear from the following analysis of a sample of melted snow collected on Jan. 30th last in the quadrangle of Somerset House. It contained in grains per gallon, according to Mr. John B. Coppock,[1] F.C.S.: total solid matter, 17·32; mineral matter, 6·25; carbonaceous matter, 11·07; free ammonia, 4·65; and albuminoid ammonia, 6·50. It is suggested that these results would indicate the value of a fall of snow, not only from an agricultural point of view, but also from a hygienic standpoint. We may accept the former as probable, since

[1] Chemical News, Feb. 22nd, 1895.

obviously snow carries ammonia with it to the ground, where it may slightly enrich the soil, although it is to be observed that these nitrogenous impurities probably only exist in the impure air of towns; but, in regard to the latter hypothesis, we may reasonably, we think, entertain a doubt, inasmuch as the severe weather, accompanied as it was by heavy falls of snow, has unfortunately proved to be the forerunner of another serious outbreak of influenza and a decided increase in the mortality from diseases of the respiratory organs.

THE POWER OF THE ASSISTANT SANITARY INSPECTOR.

A CURIOUS, but not unimportant, case has just been decided by the magistrates of Portsmouth. It appears that on Dec. 15th, at about 9.30 in the evening, one of the assistant sanitary inspectors seized some meat exposed in a butcher's shop and took it to the medical officer of health for him to see before it was taken to a magistrate to be condemned. Whilst the medical officer of health was filling up the usual condemnation form the manager of the shop at which the meat had been seized took the meat from the cart and disappeared. The manager was subsequently prosecuted by the sanitary authority for impeding the assistant sanitary inspector in the execution of his duty. For the defence it was claimed by counsel that the meat was not lawfully in possession of the inspector, it having been proved that he was appointed by the authority as assistant sanitary inspector and not as an inspector of nuisances. The court adjourned for three weeks, and then gave a decision in favour of the defendant, holding that the assistant sanitary inspector had no power to seize. It appears from Section 189 of the Public Health Act that the sanitary authority has power to appoint only one inspector of nuisances, but may appoint as many assistants "as may be necessary and proper for the efficient execution of this Act" (Public Health Act, 1875). Should this decision be upheld in the higher courts it will seriously impede the inspection of meat, as an assistant-inspector may at any time be refused admission to slaughter-houses; and should such an assistant discover any meat exposed for sale he will seek the medical officer of health or inspector of nuisances instead of seizing the meat himself at once. Such a delay will give butchers ample opportunities to remove the meat, of which they will not be slow to take advantage.

THE CANAL BOATS ACTS.

IN the twenty-third annual report of the Local Government Board, which has just been issued, will be found an interesting account by Mr. John Brydone, the inspector under the Acts, as to the condition of the canal boats during 1893. As an instance of the amount of work which a proper inspectorial control necessitates, Mr. Brydone mentions the case of one local inspector who saw but seven boats in the course of 119 visits to the waterways of his district, while two others are reported to have made no less than 68 and 138 visits respectively without encountering a single craft. It is satisfactory to note that Mr. Brydone has met with but few cases of overcrowding in the period under review; and in reference to an inspection made by himself of the boats trading on the Medway he states that he was greatly pleased with the excellent condition of every one examined. Cases of infectious disease were apparently more numerous during 1893 than formerly, and they consisted of 18 cases of small-pox, 13 of scarlet fever, 10 of typhoid fever, 2 of diphtheria, and 1 of erysipelas. The coal strike imposed, Mr. Brydone states, great hardships on the boat population, as they had to maintain their horses as well as their families during the absence of work. In some districts it appears that boats were lying idle from August to December. Mr. Brydone gives a list of the inspections made in the various districts and of the infringements of the Acts which were observed; and he also gives an idea of the extent of the canal population by telling us that during 1893 there were 12,479 boats on the books of the registration authorities. In concluding his report Mr. Brydone affirms emphatically that the Acts continue to exert the most beneficial influence upon the boat population, and that they have operated in a high degree in reducing the number of women and children travelling with the boats. The women are, he reports, feeling more and more that the canal boat employment is not a fitting one for them, and that the cabin homes are not proper places for the rearing of young children.

THE BARKER ANATOMY PRIZES.

THE Royal College of Surgeons in Ireland offer two prizes of £26 5*s.* each, open to any student whose name is on the anatomical class-list of any school in the United Kingdom. The subjects for competition are two dissections—one of the kidneys, the other of the rectum—both as seen from behind, and prepared with a view to demonstrate the surgical relations of the organs, the exposure of the rectum having special relation to its removal by the trans-sacral method. The conditions of the competition may be obtained from Mr. J. Alfred Scott, M.D., F.R.C.S. Irel., Curator of the Museums, Royal College of Surgeons, Dublin.

PROFESSOR W. R. SMITH AND THE MEDICAL SUPERINTENDENTS OF THE HOSPITALS OF THE METROPOLITAN ASYLUMS BOARD.

IN the *Times* of Monday, Feb. 4th, a brief report was published of a speech made by Professor W. R. Smith, M.D., at the meeting of the Metropolitan Asylums Board on Saturday, Feb. 2nd. It is there stated that Professor Smith concluded his remarks "by referring in strong terms of censure to the action of some of the medical superintendents of the board, who had communicated unofficial and unauthorised statistics to the leading medical journals." Being desirous of learning more particularly the circumstances which Professor Smith thus condemned, we wrote on Feb. 6th begging him to be so kind as to furnish us either with a copy of his remarks or a reference to any source where those remarks were fully and correctly reported, for we felt that if he were correctly reported Professor Smith had taken upon himself a task that sat exceedingly badly upon him in thus appearing as a sort of impeacher of his professional brethren, and we were anxious to give him an early opportunity of repudiating a wrong interpretation of his words. We received no reply, and the statement of the *Times* that Professor Smith had used "strong terms of censure" remained uncorrected. On Feb. 21st we again wrote to Professor Smith to remind him that so far he had not favoured us with any reply to our inquiry with reference to his speech, and on Feb. 27th we received a call from Professor Smith in reference to the matter. He then repudiated the word "censure" as applied to his remarks. This we are glad to learn, for it could obviously be no part of Professor Smith's duties to sit in judgment upon the attitudes of the medical superintendents of the hospitals under the jurisdiction of the Metropolitan Asylums Board. As a member of that board his public duties would make it necessary for him to take notice of any existent abuses. That is undoubted. But he must feel that it is no part of his duty to suggest the passing of votes of censure on his professional brethren, and we are glad to be able hereby to state that he did not intend to do so. We feel sure that Professor Smith, who himself fills several official posts, has no wish to add to the difficulties of other members of his

profession who are somewhat similarly circumstanced, or as an individual to usurp the functions of the Board, as would have appeared by the uncorrected report of his speech.

LORD ROSEBERY.

WE are glad to say that the Premier is now practically recovered from his attack of influenza, but the sleeplessness is still extreme, and so in some measure retards his progress to recovery. The attack has been from the first of an asthenic character, but not otherwise severe; there have been no complications. On Wednesday his lordship was able to see his private secretary for the first time since his illness and give him a few directions, but he is still quite unfit to transact any public business.

DIPHTHERIA IN LONDON.

DURING the two weeks ended last Saturday the deaths from diphtheria in London have maintained a steady decline on recent preceding weeks—namely, 27, or 4 below the corrected average, in the week ended Feb. 16th, against 29, 45, and 34 in the three weeks immediately precedent; followed by 29 last week, a number still below the corrected average by 2. Of the total of 56 deaths in the two weeks, 36 were in children aged from one to five years, this being 64 per cent. of the total. Of the 56, Poplar is credited with 6, as is also Camberwell, Greenwich with 5, St. Pancras and Battersea each with 4, Plumstead with 3, and Paddington, Islington, and Hackney each with 2 deaths. In Greater London in the fortnight there were 17 registered deaths from the disease, of which 8 belonged to West Ham and 2 each to Edmonton and Brentford districts.

"THE LAW'S DELAYS" IN VACCINATION.

IT has in time past been repeatedly, and with good reason, asserted that radical changes are called for in regard to the administration of the law of vaccination. One of the changes should assuredly be to vest local health bodies with the powers now vested in the guardians of the poor. An instance of the folly of the present system is recorded in the report of Dr. Wm. Brown, the health officer of the Stapleton urban district, as having occurred during the past year. Small-pox having been imported into the district, the patient was promptly removed to hospital on receipt of the certificate of notification. But meanwhile four persons resident in the invaded house had been exposed to the risk of the introduced infection, and the fact of their need of revaccination was accordingly at once made known to the Barton Regis Poor-law body as the "vaccination authority." Nevertheless, eight days later no action had been taken towards administering the needed prophylactic, because, forsooth, "it was not the month for vaccination." Dr. Brown hereupon himself, at his own cost, procured calf lymph and performed the operations, but too late to avert danger, as two of the four inmates contracted small-pox. Dr. Brown, like many another medical officer of health in like case, took upon him a duty imposed by law upon other authorities in his efforts to stay the spread of a disease by the best-known remedy, and one which could have been promptly administered in legal fashion by the officers of the board of guardians—it may be to the prevention, almost to certainty, of the two cases of small-pox which developed in the house. Ample powers are granted to Poor-law bodies for immediate action in emergent circumstances like the one in question; and the excuse for inaction which Dr. Brown chronicles only serves to exaggerate the neglect displayed. Only when the State remedies for the prevention and stay of disease are in the hands of the bodies charged with the function of safeguarding the public health can we hope to see prompt and efficient measures adopted. The need for prompt revaccination in such cases as the above is often recognised by the sanitary authority which indemnifies the medical officer for carrying it out; and surely, if this be so, in time of epidemic it would naturally fall to the duty of the guardians of public health to supervise vaccination in general, as a potent safeguard to the community.

AN AMATEUR.

MISS MARGARET LUCY TYLER of Pymmes Park, Edmonton, is a fortunate woman. A baby of eighteen months being ill was confided to her untutored care; she prescribed for it and it died. We say that Miss Tyler is a fortunate woman, for although it appears that she meddled in the grossest way with what did not concern her, and with what she could not possibly understand, it does not appear that she actually gave the unfortunate child anything that could do it any harm. The evidence of the practitioner who had seen the child before it fell under Miss Tyler's medical care proved that the lady's prescriptions were harmless, and so saved her from an exceedingly awkward position; but we hope that the sad issue of the case will keep Miss Tyler from dabbling in medicine, lest her next appearance in a coroner's court be less agreeable to her.

THE DIFFUSION OF SMALL-POX.

SMALL-POX last week showed some disposition towards recrudescence in the metropolis, where 21 fresh cases were recorded, the major portion of them being, however, due to the renewed prevalence of the disease in the parish of Marylebone. The sanitary officials have been severely handicapped in that parish by the occurrence of cases in crowded localities and under circumstances which have put all their well-laid plans for dealing with the disease in the background, for the reason that occurrences have remained unnotified, and therefore unremoved, with consequent resulting danger to surrounding populations. The single death from small-pox in London last week was in an unvaccinated infant belonging to Marylebone. Elsewhere in the metropolis there is nothing to report of any moment. The removals to the institutions of the Metropolitan Asylums Board during the week numbered 19, against 21, 18, and 18 in the preceding three weeks; whilst at the close of the week the patients remaining under isolation were 75, the number having been steadily increasing since the week ended Dec. 22nd, when it was 15, four weeks later it was 32, and four weeks still later 67. In the remainder of the country the news is much more reassuring, there having been only a case or two at Birmingham and a few other midland towns, and three or four attacks and one death registered at Derby. In Lancashire we hear of a small invasion at Burnley and of a case or two at Liverpool; but the provinces just now appear to be fairly free from the disease. At Edinburgh some dozen cases have been reported in the second week of February. In Dublin in the same week some slight decrease in the admissions to hospital was manifested, these having fallen from 64, 69, and 60 in the preceding three weeks to 56, the discharge, however, showing no corresponding increase; whilst the patients left in hospital at the close of the week were 149 in number, in addition to 115 convalescents at Kilmainham, making a total of 264, a decline on previous totals. Of the 8 deaths in the week, 3 were in vaccinated and 3 in unvaccinated adults, no statement being forthcoming as to the condition as to vaccination of the remaining deceased persons.

THE next meeting of the Pathological Society of London will be devoted to a discussion upon the Bacteriology and Pathological Chemistry of Diphtheria and its Antitoxin. The subject will be introduced by Dr. Bertram Hunt. Several

members of the society who have been working at the subject have promised to take part in the discussion.

AT a meeting of the council of the Mason Science College, Birmingham, on Feb. 23rd, Mr. Oliver Pemberton, F.R.C.S. Eng., was for the third year elected President.

Pharmacology and Therapeutics.

A RETROSPECT.

THE therapeutics of the past year are remarkable for the enormous extension of serum therapeutics—i.e., the therapeutic use of bacterial products—and also for the increase of organic extracts. Perhaps, after all, our ancestors were not so very far out when they filled their books on natural history with long accounts of the medicines to be derived from various animals. To this day, in the peninsula of Athos, oil in which a new-born rat has been macerated to solution is esteemed a sovereign remedy for all pains; while in Russia tinctures prepared from toads and cockroaches are used by the peasantry with apparent success in the treatment of cardiac ascites and œdema. The list of coal-tar derivatives still lengthens, and in the new Year-book of Treatment we find eight new preparations.

A NEW MANUAL OF PRESCRIPTION.

America has long been famed for the "elegance" of her pharmaceutical preparations, and it should be the aim of every practitioner to make his prescriptions pleasant as well as scientific. A new Manual of Prescription Writing, published in Philadelphia, gives a number of wise cautions to the prescription writer. A number of prescriptions are given to instance incompatibles and a full dosage table is given in both metric and ordinary systems of measures and weights.

PATENT MEDICINES.

In the February number of the *Druggists' Circular*, a trade journal published in New York, there is an admirable little article upon a Bill recently introduced into the Lower House of the Alabama Legislature. This Bill makes it unlawful to sell or give away any patent or proprietary medicine unless the formula of such medicine is shown on the label of the packet containing the same. The *Druggists' Circular* does not seem to have much expectation of this Bill passing, but its introduction is a good sign of a more healthy feeling prevailing as to nostrums. The old adage, however, we suppose will still hold good, "Populus vult decipi, et decipiatur," and if a similar Bill were introduced in this country we suppose there would be the same doubts as to its success. We have no intention of giving the proprietors of quack medicines gratuitous advertisement, but we do not think it right that the people of this country, "mostly fools" though they may be, should be given the opportunity of letting diseases run on till they get too far advanced for even relief, while they waste valuable time in buying and using aloes pills, yellow oxide of mercury ointment, iodide of potassium, and sarsaparilla or "electricity" at some 800 per cent. over cost price. The way in which religious papers advertise these wares is disgraceful, and so-called cures are generally certified by ministers of religion as being due to the effects of Podger's Pills or Hookey's Elixir. In a good many instances patent medicines are harmless, but there are two notable exceptions, chlorodyne and neuraline. The former is undoubtedly a very valuable preparation, and very dangerous if taken recklessly. It contains at least three most powerful poisons, and yet there is absolutely nothing to prevent anyone, however ignorant, from buying as much as he likes, while, were he to try to purchase the ingredients separately, the illogical Legislature would step in and prevent him. Neuraline contains, we believe, aconitine, perhaps the most virulent poison known, and the sale of this is safeguarded by no restriction whatever. As long as this kind of thing can go on the Sale of Poisons Act is simply useless.

HÆMOSTATICS.

A correspondent from Cannes informs us that he has tried with great success a new hæmostatic—ferripyrin—a compound of chloride of iron and antipyrin which has the great advantage of being non-caustic. He found that prolonged application by means of tampons left only a slight anæsthesia of the mucous membrane. The hæmostatic properties of antipyrin have also been made use of in uterine hæmorrhages by Dr. Labadie-Lagrave of l'Hôpital de la Maternité, Paris. The method used, as described by *La Revue Médicale* is as follows:—Equal parts of salt and antipyrin are put into a tube and heated over a spirit lamp. The mixture soon melts into a liquid of a slight brownish colour, but must not be yet used, as at this stage it again rapidly solidifies, but heat must be continued until the colour is a pronounced brown. When this stage is reached the mixture is introduced into the uterus by means of cotton-wool on probes (care being taken that the liquid is not applied too hot). One or two applications are then made according to the severity of the hæmorrhage, which is said usually to cease very quickly. The operation is simple and free from danger, and has proved useful in cases of fungating endometritis, fibromyomata, and other tumours.

THE THERAPEUTIC USES OF STRONTIUM.

The *Tribune Médicale* in discussing the treatment of convulsions recommends strontium bromide internally. This salt, which is very soluble in water, has also been given instead of potassium bromide in epilepsy, in some cases of which it is better borne over a long period than the potassium salt. It has also been given in cases of dilated stomach with some success. The dose is five to thirty grains. The lactate of strontium has been found serviceable in checking albuminuria in cases of parenchymatous nephritis, but is said to be of no use in the interstitial variety.[1] Wood[2] found that strontium bromide was less prone than the potassium salt to produce acne and other disagreeable symptoms, but that it also had less control over the epileptic paroxysm.

THE ESSENTIAL OILS OF THE BRITISH PHARMACOPŒIA.

In connexion with the proposed revision of the Pharmacopœia we have received a copy of a *brochure* by Mr. Helbing and Dr. Passmore, which contains the results of their experience of a large number of essential oils, from which they have been able to define the limits of variation in genuine oils of good quality. The results appear to be based for the most part upon physical tests, boiling points, freezing points, optical activity, &c. The chemical method recently suggested for standardising eucalyptus oil, depending upon the formation of eucalyptol phosphate on the addition of syrupy phosphoric acid, is not viewed with favour, and it is remarked that the method of fractional distillation is preferable and affords constant results. Some twenty types of essential oils are dealt with, each section concluding with practical suggestions bearing upon future pharmacopœial requirements. The essential oils belong, of course, to an important group of bodies in the Pharmacopœia, and there is little doubt that they have frequently been the subject of considerable adulteration, especially as the means of detection is not easily or conveniently carried out. The value of this contribution is therefore obvious, and the results are such as to merit the careful attention of those who are about to consider the much-needed revision of the British Pharmacopœia.

THE TREATMENT OF DYSENTERY.

Surgeon-Major S. T. Avetoon, of the 1st Baluch Battalion, L.I., sends us the following communication:—"I wish to bring to the notice of the profession a new treatment for acute dysentery. It is not original, but was obtained from a medical work in Persian. This is what the book stated (I translate):—'Treatment for acute dysentery: Reduce cinnamon bark to a fine powder, take one and a half drachms, mix it with a little "mullai" (the cream which gathers on the top of boiled milk after it is allowed to settle and cool), and administer in the morning on an empty stomach. The patient will be cured.' I have made a slight alteration in the above. The powdered cinnamon is given in drachm doses only, mixed with a few drops of water and made into a ball, which is given to the patient to eat, washed down by a mouthful or two of water. This quantity is repeated again in the evening, and so on, morning and evening, until a cure is effected. It is a little over two years since I started this method of treatment, and have cured about thirty cases of the disease. Often patients have been cured by only one or two doses of the drug, while my worst case was cured after five doses only, but a sixth was given to make quite sure. This method of treatment is vastly superior to

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[1] Germain Sée and others.
[2] Therapeutics: Smith, Elder & Co., London, 1894.

the ordinary ipecacuanha treatment in that the medicine is pleasant to take and causes no nausea or vomiting, and acts, if anything, quicker and better than ipecacuanha. If the drug were given in drachm and a half doses as recommended in the book, most probably cures would be effected more quickly, but my method has been quite quick enough. The earlier the treatment is begun the quicker the cure."

THE LOCAL GOVERNMENT BOARD REPORT (1893-94) ON FOOD AND WATER-SUPPLY.

IN view of the unfinished labours of the Select Parliamentary Committee on Food Products Adulteration—which will probably soon be reappointed now that Parliament has met again—the section of the report of the Local Government Board relating to the working of the Food and Drugs Act possesses more than ordinary interest. At the outset it may be stated that the present Blue-book shows distinctly that very little improvement has been effected in this section of State administration since the issue of the last Blue-book. Indeed, there is a remarkable analogy in the conclusions between the reports of this and the last official year. Thus in the 1892-93 Blue-book we read that the extent to which the Acts were utilised varied considerably, while they were absolutely ignored in four administrative counties and twenty-seven boroughs, and in other districts with the population ranging from 299,000 to 88,000 the number of samples taken for analysis varied from 35 to 8. The Board expressed surprise in 1893 that "the local authorities were content to leave the inhabitants without that protection against fraud by the sale of adulterated food which the exercise of the statutory powers conferred on the authority would be likely to ensure. So in the present report we read that within the jurisdiction of the County Councils of Hereford and Montgomery, and of the town councils of sixteen boroughs not one sample was taken for analysis during the year, while in the jurisdiction of nine other county councils and in eighteen other boroughs, including largely populated districts, the number of samples taken "was so small as obviously to afford no security against adulteration." And yet it happens that 37,233 samples were examined this year against 29,028 last year, the result of this slight increase being to show an increase of adulteration by 0·5 per cent. This is one point surely which is worthy the notice of the Food Products Adulteration Committee. In a table in the appendix we find that whereas 240 samples were taken in a certain district, the result showing an adulteration of 26 per cent., in the district of an adjoining vestry, returning below 9 per cent. of adulteration, only twenty-four samples during the year were taken. It might well happen, therefore, that the administration of the Act is efficient at one end of a street and not at the other, or even on the one side and not on the other. This is not only against the interests of the public, but unfair to tradesmen. The inadequacy of fines and the leniency of magistrates formed another subject of comment in last year's Blue-book, and still we read in the report before us that "the fact remains that in the majority of cases the fine has not been sufficient to deter a dishonest dealer from repeating his offence." Here is another point which should receive the attention of those who are called upon to effect reform where it may be necessary. No article of food requires more careful consideration, perhaps, than milk, which, "as usual, formed the chief subject of analysis" during the past year, and out of 15,543 samples analysed no less than 2310, or 14·9 per cent., were reported against. With the exception of spirits, the extent of adulteration of which (chiefly with water) was 19·7 per cent., milk proved to be the article most extensively sophisticated. As, however, numbers of samples are reported as "poor," "very poor," "of doubtful genuineness," "probably slightly watered," it is probable that even this large proportion does not adequately represent the full extent of adulteration. With the view of placing the detection of watered milk on a more satisfactory basis Dr. Bell has made a great number of analyses, which included the milk of 273 individual cows and the mixed milk of fifty-five dairies. The results apparently show that while there has been a sensible improvement in the quality of milk since a previous investigation ten years ago, as regards the proportion of fat, the non-fatty solids are in substantial agreement with the results obtained from the samples previously analysed. This improvement, we suggest, is not improbably due to improved methods of analysis for the more complete extraction of fat. An important observation is made in regard to the sale of milk on Sundays, on which day it is more frequently found to be watered than on week days, while again the milk supplied by contract to various large institutions is in many instances grossly adulterated. This attempt to evade the Act should be narrowly watched by the governing bodies of such institutions. Next to milk butter appears to be the subject of considerable adulteration (with water or foreign fat), the proportion of adulteration being 13·7 per cent., and in London, as in previous years, it is nearly twice as high as in the country. The adulteration of coffee has decreased sensibly; while in regard to other articles there is little important change to report except in the case of beer, the adulteration of which has diminished from 16·8 to 4·4, and in drugs from 20·4 to 11·3 per cent. Lastly, it appears that of the samples purchased privately 27 per cent. were reported against, or more than double the proportion of those purchased officially. This difference may be due to the fact that private purchasers will not incur the expense of analysis unless they have *primâ facie* grounds for suspecting adulteration. At any rate, this is another fact which can scarcely escape the attention of those who may be led to recommend the revision of the Acts, especially in regard to the present system of inspection and the purchase of samples.

The recent Blue-book shows, therefore, that the defects of the present Act, in spite of having been indicated with emphasis from time to time in the Local Government Board reports, still exist; while it is important to observe that as the result of submitting a greater number of samples for analysis last year a higher percentage of adulteration has been reported.

Perhaps one of the most important statements contained in the Blue-book of 1893-94 in regard to water-supply is that relating to the quantity of water abstracted from the Thames by the metropolitan companies. It appears that the daily discharge of the Thames, including the amount withdrawn for water-supply, averages about 1,300,000,000 gallons, and that the maximum amount of water which the companies are collectively empowered to withdraw in twenty-four hours is 130,000,000 gallons, and from this it is concluded that the water daily extracted from the Thames for the use of the metropolis "is but a small fraction of the average amount of water discharged by the river." It must be remembered, however, that the quantity of water passing over Teddington weir varies enormously at different seasons. Thus, while in February, 1893, the average daily discharge was 3021·4 million gallons, the daily figures for September, 1893, averaged only 298·3 million gallons; while the lowest gauging occurred on Aug. 21st, when only 141·3 million gallons passed over the weir and 110 million gallons—nearly a half of the total flow—were abstracted for water-supply before reaching the weir. It was this fact which led the engineer of the London County Council to remark in a report[1] drawn up by him in 1891 that "it would be most dangerous to abstract any larger quantity." With regard to the quality of the Metropolitan water-supply, Professor Frankland's figures show that the Thames water distributed during the year 1893 was of a much better average quality than that sent out during the previous two years, although "it still fell short of that supplied during 1886 to 1890 inclusive." Speaking generally, the Lea water is superior to that of the Thames and the water in the upper reaches of the Lea is purer than that in the lower; but on the other hand it was found that the Lea water at the East London intakes contained twice as many bacteria as the Thames intakes, so that obviously the chemical quality of water is quite another thing from its bacterial quality. Professor Frankland's remarks upon the purifying influences of flow, insolation, efficient sand filtration, and of storage are in substantial accord with the conclusions contained in the report of the Royal Commission on Metropolitan Water-supply:[2] "It is gratifying to find," he says, "as the result of recent researches that the zymotic poisons are rapidly destroyed in running water exposed to sunlight, so that the most minute microscopic inspection of the water at the intakes of the various companies has hitherto failed to discover a single

[1] THE LANCET, Dec. 12th, 1891.
[2] THE LANCET, Sept. 30th, 1893.

pathogenic germ." Further, "it is now an established fact," he goes on to say, "that efficient sand filtration would prevent the passage of such germs into the filtered water, even should they arrive in a living condition at the intakes. Thus the hygienic objection to the use of water taken from the Thames and Lea is removed. This conclusion is confirmed by the absence in London of zymotic disease traceable to these waters since the year 1866." To secure this desirable result, however, he cautiously and very wisely adds: "Efficient filtration is essential; and there can be no doubt that the immense loss of life in London during the cholera epidemics of 1849, 1854, and 1866 was due to want of attention to filtration." Actual experiments are given showing the enormous reduction of bacteria effected by storage and efficient filtration. This reduction amounts in most cases to 98 per cent.; but in some instances the water as it is pumped into the mains has actually proved on bacteriological examination to be absolutely sterile. On the other hand, it would appear that a thorough washing of a filter bed had seriously impaired its quality for effecting bacterial purification. Professor Frankland's bacteriological investigations on this special subject have been continued for twenty months, and they are being supplemented by an extensive series of experiments upon the condition necessary for effective microbial filtration. These experiments are not yet complete, but in the meantime he offers some practical remarks which are of extreme interest and importance in connexion with the purity of a future supply. Thus he says that efficient sand filtration does not appear to depend essentially upon the thickness of the sand of the filter beds, but rather on the rate of filtration, and according to extensive experiments made in Germany under Professor Koch's direction the maximum rate should not exceed 2·1 gallons per square foot of filtering surface per hour to secure satisfactory bacterial purity. As is well known the bacteriological efficiency of sand filtration depends also largely upon the formation of a thin film upon the surface of the sand, "which forms a nidus for and becomes thickly populated with microbes, which in all probability aid materially in the purification of the water passing through the filter. This film should, therefore, be removed as seldom as possible consistent with the passage of a sufficiency of water. New filters and thoroughly washed filters are very ineffective for a considerable time, and it is very necessary that the length of time required to bring a scraped or washed filter into an efficient condition should be ascertained." It must be admitted that this is amongst the most interesting contributions on this subject, and its perusal affords a relief from the statistics and ordinances with which the Local Government Board's annual Blue-book generally abounds.

WINTERING SOUTH AND THE CROSS CHANNEL SERVICE.

(FROM A SPECIAL CORRESPONDENT.)

Calais, February.

THE exceptional severity of the winter has doubtless tempted many persons to seek a more genial climate in the South of France or at other winter resorts; but, however advantageous it may be to escape northern frosts and fogs, the journey southwards has been attended this year with exceptional difficulties. There are many routes to the Continent, but undoubtedly the most popular is that of Dover and Calais. It is the safest and the shortest sea passage. Unfortunately the deplorable condition of Calais Harbour has throughout this winter marred these notable advantages. As the climatic treatment of disease becomes more and more general, so also does the facility of reaching suitable health resorts become a matter of increasing practical importance. The general public, or, to speak from our special point of view, persons in the enjoyment of sound health, can with comparative impunity face the trials of a longer sea journey in large and comfortable boats or of the short sea journey in small and uncomfortable boats. The ordinary Calais boats are of the latter type. They are excellent sea boats, never known to be wrecked, and of such diminutive size that they can enter safely the narrowest and worst of harbours. On the other hand, they are veritable cockle-shells, as light as a feather, that roll and pitch in response to the minutest ripple, and are warranted to provoke sea-sickness on the smallest provocation. This grievance has been fully recognised by the owners of these vessels; and the London, Chatham, and Dover Railway Company has for many years sought to place on the line large and commodious vessels. The latest type of steamers employed, the new *Calais-Douvres*, the *Victoria*, and the *Empress*, are steady and large ships, that toss and roll only when the sea is really rough, and effect the passage from pierhead to pierhead in an hour and ten minutes instead of one hour and three-quarters—the usual time of the journey in the smaller ships. Formerly the large vessels were available twice a day for passengers leaving London at 11 A.M. or Paris at 11.50 A.M. and for travellers by the Club train. There should be no difficulty in crossing the Channel in these ships, and considering the rapidity of the sea passage, the steadiness of the ships, their size, and the ample accommodation on board, this route seems to be well suited to the needs of the invalid. The vessels are, it is true, rather big ships to enter Calais Harbour at all times and in all conditions of the tide; but then no less a sum than 34,000,000 fr. had been voted to improve Calais Harbour, and therefore it was only natural to conclude that improvements would be effected. Extraordinary as it may seem, the most important, the most urgent of improvements is precisely that which has been left to the very last. Magnificent and spacious docks, amply supplied with warehouses, hydraulic cranes, improved machinery, ample railway and canal connexions, have been constructed. The tidal basin has been enlarged and deepened, and a new maritime station built, surmounted by a comfortable and well-appointed hotel. Every facility for landing the passengers is thus provided, and ships, once within the harbour, will find all they need to discharge their cargoes or to effect repairs. But, strange to say, the entrance to the harbour is only changed from bad to worse. It is as if someone built and even furnished a splendid house, but forgot to make a street or entrance door. The works have been begun at the wrong end, for assuredly before building so luxurious a harbour measures should have been taken to ensure a proper and safe entrance for the ships.

Two parallel wooden jetties running N.W. and S.E., built on stone foundations, constitute the entrance to the Calais tidal basin. The width at the entrance is 328 ft. Not only is there no widening of the channel for a considerable distance, but the foundations of the jetties protruding under the water very considerably narrow the navigable portion of the space between. The currents pass swiftly and strongly across the harbour mouth, so that the entrance must be effected in a diagonal direction, and the vessel must turn the moment the pierhead is past, so as not to strike the jetty on the other side. This is easily effected with the small light ships of the Channel service, but the larger and more modern vessels cannot be so readily managed in so restricted a space; while, on the other hand, both current and wind have a greater hold upon them. Thus, in 1888, the *Invicta* missed the piers and was thrown upon the sands, where the passengers were landed when the tide went down without further inconvenience than that occasioned by the delay. Some years later the *Victoria*, which is also a large vessel, was dashed during a fierce storm against the eastern pierhead, which it in part demolished. The *Victoria* was then running in connexion with the Club train, and after this accident it was decided not to allow the bigger ships to cross in the dark. As the crossing for the Club train was effected after nightfall during the winter season this decision largely contributed to the failure and final abandonment of that service. The public did not see the advantage of paying 16*s.* more than the first-class fare to cross in the oldest, the smallest, and the slowest boats.

So far as invalids are concerned, the only route remaining that could be recommended was the second or eleven o'clock day service, when the passage could be effected in the big ships. Troubles, however, did not end here. Some weeks ago a very violent storm entirely destroyed the head of the eastern pier of Calais and carried away the lighthouse. Consequently, when the *Empress* was entering during a violent easterly gale an exceptionally large wave dashed her against the western pier, which in its turn was considerably damaged. It will be remembered that the *Empress* had one of her paddles smashed and was thrown on the sands, where her passengers in due course landed safe and sound. This has led to yet another restriction. The big ships are now not only withdrawn from all service after sunset, but they must no longer attempt to cross when there are easterly gales

blowing, as the broken end of the eastern pier at Calais no longer affords sufficient protection. Nor is this all; some fishermen tried to bring into port an abandoned sailing-vessel, with the result that she was wrecked on the broken stump of the eastern pier. In a little while the wreck, beaten by heavy seas, snapped in two, and one half of the ship rolled over into the harbour entrance between the two jetties. The navigable space remaining was so narrow that the service of the big Channel steamers had to be abandoned altogether, no matter how favourable the weather might be. Fortunately the wreck has now been blown up with mélinite, and the big ships are once more carrying passengers across.

From all this it will be seen that when advising patients how to cross, with the least possible exposure, the eleven o'clock day route can alone be recommended, and this only when there is no prospect of an easterly gale. For invalids such restrictions are really very serious. So far as the hale and strong are concerned the dangerous condition of the entrance of Calais Harbour need not be a matter of much concern. There are no rocks near Calais, and apparently the worst that can happen is that the ship might be stranded upon the soft sands and the passengers made to wait till the tide has gone down so as to land over the ship's side. Such an experience, however, while only constituting an exciting adventure to a vigorous traveller, might have very serious consequences for an invalid. It is therefore most urgent, not only from the general point of view, but more especially with respect to the many thousand patients who are yearly sent to winter abroad, that the entrance of Calais Harbour should not be allowed to remain in its present condition.

Of course, the vast harbour works, on which so much labour and money have been expended, include a new and better entrance; only this is the portion of the scheme which, instead of being first taken in hand, has been left to the very last. The eastern jetty is to be demolished and a new jetty built in its stead. The entrance will then be 430 ft. instead of 328 ft. wide. But, what is more important, the foundations of the new jetty will be perpendicular, with the woodwork on the inner side of the harbour. Ships will therefore be able to come up along side of the jetty without the fear of grounding upon its foundations. Further, the jetty, instead of running parallel with the western jetty, will widen out like a sleeve, thus facilitating the manœuvres of ships entering. Of this new jetty the foundations of the first half, that nearest to the shore, are completed, and the upper or wooden part is finished for only a quarter of the total length. For the remainder thirteen metallic caissons have to be sunk under water in the sands, which will then be filled with masonry and constitute the foundations. Eight of these caissons are already in position; but the thirteenth, which is double the size of the others and will serve as the foundation of the new pierhead, is by far the most important and difficult to place. It has been ready since last September; but, as a fortnight's fine weather is necessary to sink it in the sands, it has been impossible, as yet, to attempt the operation, and a favourable opportunity is scarcely likely to occur before May or June next.

Altogether, the new jetty will not be completed and the foundations of the old jetty dug up and cleared away for about another two years. Happily, so far as the running of the larger steamers between Calais and Dover is concerned, the completion of these works is not necessary. The entrance to the harbour will be safe for the largest Channel passenger steamers when protection from the easterly winds and waves is secured by the construction of the foundations of the new pierhead, and when the entrance is widened by the removal of the foundations of the old and broken pierhead. The remains of the old jetty will then serve as an effective protection till the whole of the new pier is constructed. It is thought that this much at least of the works will be done by next autumn. Patients returning to England next spring will have to suffer from existing inconveniences, but no effort should be spared to secure a safe entrance in all weathers into Calais Harbour for the big steamers, who will convey patients travelling south at the end of this year. By dealing with the two pierheads, the old and the new—removing the one, building the other—this security can be ensured, and the work can easily be done during the summer if sufficient energy and determination are displayed. The reputation and the material interests of the town of Calais largely depend on the successful fulfilment of this task.

MASON COLLEGE ANNUAL DINNER.

THE annual dinner in commemoration of the founder of Mason College (who was born on Feb. 23rd, 1795) took place on Saturday night, at the Great Western Hotel, Birmingham. Professor Clifford Allbutt, M.D., F.R.C.P., F.R.S., Regius Professor of Physic in the University of Cambridge, presided over a large gathering, which included the Mayor (Alderman Fallows), Sir Walter Foster, M.P., Mr. Oliver Pemberton (President of the College), Dr. J. Gibbs (Vice-President), and the other trustees; the Principal (Dr. R. S. Heath), the Dean (Dr. Windle), and the members of the College staff; and about forty medical men from Birmingham and the midland counties.

The loyal toasts having been honoured, "The Memory of the Founder" was drunk in silence.

The Chairman, in proposing "The College," spoke of the munificence of wealthy men who in the past had founded such colleges as theirs, and, in alluding to Sir Josiah Mason, said he considered him a very remarkable man, for the reason that he not merely devoted large sums of money to very interesting and useful purposes, but in the development of those schemes he followed the advice of others as well as his own opinion. He was not in any way wedded to the primary and original scheme upon which he founded the college, and he enlarged the scheme twice in the life of the college after its original foundation. In the first instance, he understood that Sir Josiah Mason's idea was that the college should be limited to the giving of a rather narrow technical education; that he thought, and thought quite rightly, that there was very great need for that kind of education in certain crafts. He, however, soon seemed to recognise the advisability of putting into the work a spirit of a broader kind, and consequently he developed the college and brought it under the terms of a university college. He (the chairman) ventured to suggest, although to give degrees was a matter of legitimate ambition, that they might call Mason College a university college independently of it. The giving of degrees was not really a definite mark of a university college; it was, he thought, a secondary matter entirely. He deprecated the idea of degrees being given because of their commercial value, and said they should only be regarded by their possessors as indicating a good and useful training. He considered it rather an advantage that a college such as the Mason College and those of Yorkshire, Lancashire, and Manchester, placed as they were, should have begun as technical schools. It was sometimes said the character of the teaching in a technical college must be something baser than that which began in large and abstract studies. But that was a point of view which was very much weaker than formerly, one from which he absolutely dissented, and one which those colleges in the provinces were strong witnesses against. They could not teach anything in general unless they began by teaching something in particular, and he did not think it mattered what they taught so long as it was taught in a university spirit. Touching upon the subject of degrees, the chairman deprecated their use as advertisements, and said they merely signified two things. They signified the grade of an interior function within the university, and, therefore, were a matter of internal convenience; and also indicated that the teaching in the school where they were given was free, and so long as their students had to be examined by somebody else their teaching was not free. To have to cut and dry a Birmingham examination to please a London examiner, or a Liverpool examination to please a Cambridge set of examiners, was fatal to anything like variety and freedom within the walls of those colleges themselves. Therefore he hoped on their own behalf most sincerely that the time would come when Mason College would be able to give degrees, not because they wanted them for advertisement, but because they wanted to indicate the kind of training to which their own people had been put. They might place the work of a college of this kind in three stages: first for adapting a man for the duties he had to perform; then to go on to a wider knowledge, to general cultivation of the mind; and, thirdly, the ideal that they might pursue knowledge entirely for its own sake—what Milton called "for the contemplation of the sweet countenance of truth," and that he would call illumination. If they got those three degrees, in fact, then he did not care much when the time came for getting nominal degrees, except that it would free them to give their teaching in the best way they could.

Principal Heath, in responding, observed that they owed a great debt of gratitude to the universities, but the problem they had to face in a busy city like Birmingham was different *toto cœlo* from that of the ancient universities. They were in the middle of great industrial enterprise, and the training they had to give had to bear relationship to that industry. The quality of breadwinning demanded a great deal more serious attention from them than it did from the University of Oxford or Cambridge. At the same time, they had had pointed out to them how technical education was not inconsistent with a liberal education, and how a lofty ideal and a high plane of intelligence were necessary and also attainable, although their training had to bear close relationship to the practical issues of life. They had great cause for gratitude in having received considerable sums during the year from generous friends. In that respect the year had been a favourable contrast to many years that had preceded it. They had received this year no less a sum than £17,000 The late Alderman Avery left them by will £2000, and just recently that had been supplemented by a gift of £2000 from the executors of his estate. An endowment of £5000 for the maintenance of the physical laboratory had also been anonymously contributed during the year. To endow the new department of education for elementary teachers Mr. George Kenrick had conveyed to the council securities producing an income of £200 a year, and that had been supplemented by a further gift from Mr. George Dixon, M.P., of £1000 for the same purpose. Lastly, Mr. John Corbett of Droitwich had founded scholarships with a capital sum of £1000, to bear his name. That was very encouraging, and it was to be hoped that a tide had set in in their favour that would lead them on to fortune.

Professor Windle also replied. He said that in Birmingham they had nothing to complain of with respect to the clinical field provided for the students. In addition to the General and Queen's Hospitals, at which the ordinary course of instruction was followed, students were able to attend the Fever Hospital and Lunatic Asylum, which were corporation institutions, and also by the kindness of their staffs the Eye, Orthopædic, and Ear and Throat Hospitals, at which they were able to follow some of the more important special branches of the profession. Nor had Birmingham anything to complain of in the medical school. It provided at present more than 50 per cent. of the honorary and paid staffs of the hospitals, a fact which was an eloquent vote of confidence in the school on the part of the managers of those institutions. The presence of medical students, moreover, at the hospitals had a very important bearing on the prosperity, of those institutions. He thought it was hardly recognised what a difference it would make to the managers if there were no medical students in the city, and if the work which they gratuitously performed in the hospitals had to be carried out by paid officers.

Professor Lapworth proposed "The City," to which the Mayor responded.

Professor Barling gave the toast of "The Visitors."

Sir Walter Foster, M.P., in response, spoke of the educational facilities of Birmingham, which had been largely brought about by the munificence of its citizens. He trusted that the example set would be followed by others, for there was nothing a man could do better than distribute his wealth while he lived. He was glad to know that in Birmingham one of its foremost citizens had founded an institution by which a child could climb to the highest position of culture and learning, and having that heritage the need for leaving him piles of wealth was taken away. Referring to the medical school, from his position on the General Medical Council he was able to say that the high standard of passes for which the Birmingham Medical School had always been distinguished was maintained, and more than maintained. Although no longer directly connected with the school he was still deeply interested in its prosperity.

Mr. Oliver Pemberton, in submitting "The Chairman," said in him they had one of the most brilliant examples of the union of science with the practice of medicine.

The Chairman briefly replied, and the proceedings terminated.

AN APPEAL.

WE have received the following letter from Mr. Henry Morris. It has reference to a sad case which we also desire to urge upon our readers as an exceedingly deserving one. We have been able to be of some temporary service, but some time must elapse before the bread-winner, struck down so sadly while employed in charity, is in a condition, if ever, to earn his living again, and during that time help is and will be urgently needed. We desire to supplement Mr. Henry Morris's generous appeal.

"SIRS,—I hear that the merit of this case is known to yourselves, but I desire to make it known also to the profession through your columns.

"Charles Bryan Townshend, L.R.C.P., L.R.C.S. Irel., aged forty-two, was until recently in practice in King's-road, Chelsea. The work was hard, the patients poor, and bad debts prevented him from saving. His health requiring a change from Chelsea he sold his practice as a going concern of £500 a year and with the proceeds of the sale started in practice in Richmond-road, Kingston. In April, 1891, in attending a poor woman — a gratuitous patient—in her confinement he became inoculated with syphilis on the forefinger of the right hand. He did not realise the nature of the sore, and had no general treatment until he came under my charge in June, 1891. He then underwent a prolonged specific treatment. Shortly after Christmas last he became affected with spinal disease. For this I recommended him to consult Dr. Buzzard, which he did. Mr. Townshend is now seriously ill with complete paraplegia. He is a married man, with six children between the ages of ten and eighteen years. He had formed a nucleus of practice at Kingston, but by his present illness, which quite incapacitates him, he and his family are entirely deprived of any means of subsistence. Neither Mr. Townshend nor his wife, who has also been in very bad health, have any prospect of assistance from their own immediate relatives, and for this reason I have decided to appeal for him in his sad condition to his professional brethren. Subscriptions will be received and duly acknowledged by his brother, the Rev. Horace Townshend, M.A. Dub. and Camb., Chaplain of Islington Workhouse, 41, King Henry's-road, South Hampstead, and I am authorised by Dr. Buzzard to say that he will start this list with a donation of five guineas, and I shall be happy to give a similar sum myself. "I am, Sirs, yours faithfully,

"Cavendish-square." "HENRY MORRIS."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6866 births and 6014 deaths were registered during the week ending Feb. 23rd. The annual rate of mortality in these towns, which had increased in the four preceding weeks from 18·7 to 26·7 per 1000, further rose last week to 29·6. In London the rate was as high as 34·0 per 1000, while it averaged 26 5 in the thirty-two provincial towns. The lowest rates in these towns were 17·4 in Gateshead, 19·8 in Derby, 19·9 in Leicester, 20 3 in Oldham and 20 5 in Hull; the highest rates were 31·5 in Cardiff 34·0 in London, 35 2 in Nottingham, 38 0 in Plymouth, and 46 1 in Liverpool. The 6014 deaths included 317 which were referred to the principal zymotic diseases, against 312 and 315 in the two preceding weeks; of these, 94 resulted from whooping-cough, 70 from measles, 55 from diphtheria, 43 from diarrhœa, 33 from scarlet fever, 20 from "fever" (principally enteric), and 2 from small-pox. The lowest death-rates from these diseases were recorded in Leicester, Sunderland, Bristol, Swansea, and Birkenhead; and the highest rates in Norwich, Sheffield, Burnley, Manchester, and Salford. The greatest mortality from measles occurred in Bolton, Sheffield, and Gateshead; from scarlet fever in Wolverhampton, Salford, and Huddersfield; and from whooping-cough in Norwich, Manchester, and Burnley. The mortality from "fever" showed no marked excess in any of the large towns. The 55 deaths from diphtheria included 29 in London, 4 in Leeds, 3 in West Ham, and 3 in Sheffield. One fatal case of small-pox was registered in London and 1 in Derby, but not one in any other of the thirty-three large towns. There were 75 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Feb. 23rd, against 51, 56, and 67 at the end of the three preceding weeks; 19 new cases were admitted during the week, against 18 in each of the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1658, against 1653, 1667, and

1657 on the three preceding Saturdays; 152 new cases were admitted during the week, against 160, 149, and 159 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 324 to 840 in the four preceding weeks, further rose to 1119 last week, and were as many as 615 above the corrected average. The causes of 107, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Oldham, Leeds, Gateshead, Newcastle-upon-Tyne, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Huddersfield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 23·9 to 35·1 per 1000, further rose to 41·1 during the week ending Feb. 23rd, and exceeded by 11·5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 24·0 in Perth and 24·9 in Aberdeen to 38·0 in Edinburgh and 51·0 in Glasgow. The 1186 deaths in these towns included 51 which were referred to measles, 36 to whooping-cough, 11 to diarrhœa, 7 to diphtheria, 4 to scarlet fever, 4 to "fever," and 2 to small-pox. In all, 118 deaths resulted from these principal zymotic diseases, against 81 and 115 in the two preceding weeks. These 118 deaths were equal to an annual rate of 4·1 per 1000, which was 2·5 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 26 and 46 in the two preceding weeks, further rose to 54 last week, of which 22 occurred in Edinburgh, 18 in Glasgow, and 12 in Aberdeen. The deaths referred to whooping-cough, which had increased from 18 to 33 in the four preceding weeks, further rose to 36 last week, and included 30 in Glasgow. The 7 fatal cases of diphtheria differed but slightly from the numbers recorded in recent weeks, and included 4 in Glasgow. The deaths referred to different forms of "fever," which had been 6 in each of the three preceding weeks, declined to 4 last week, of which 3 occurred in Glasgow. The 4 fatal cases of scarlet fever were within 2 of the number in the preceding week, and included 2 in Glasgow. The 2 deaths from small-pox were recorded in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 214 and 345 in the two preceding weeks, further rose to 517 last week, and were more than four times the number in the corresponding week of last year. The causes of 96, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31·9 and 34·2 per 1000 in the two preceding weeks, further rose to 35·1 during the week ending Feb. 23rd. During the past eight weeks of the current quarter the death-rate in the city has averaged 33·0 per 1000, against 22·2 in London and 25·5 in Edinburgh. The 235 deaths registered in Dublin during the week under notice showed an increase of 6 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 19 and 17 in the two preceding weeks; of these, 6 resulted from small-pox, 1 from diphtheria, 1 from whooping-cough, 1 from "fever," 1 from diarrhœa, but not one either from measles or scarlet fever. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 1·5 in London and 5·1 in Edinburgh. The fatal cases of small-pox, which had been 5, 7, and 8 in the three preceding weeks, declined again to 6 last week. During the past eight weeks of the current year as many as 59 deaths from small-pox have been registered within the city. The mortality from "fever" showed a further decline from that recorded in recent weeks. The 235 deaths in Dublin last week included 41 of infants under one year of age and 70 of persons aged upwards of sixty years; the deaths of infants showed a marked increase, while those of elderly persons showed a slight decline from the number recorded in the preceding week. Eight inquest cases and 8 deaths from violence were registered; and 82, or more than a third, of the deaths occurred in public institutions. The causes of 22, or more than 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR ROCHE has been posted to the Western district, and Surgeon-Major Beatty to Belfast. The following officers have embarked in the *Malabar* for India:—Surgeon-Major Dempsey, Surgeon-Captains Sexton and Nicoll, and Surgeon-Lieutenant Farmer. Surgeon-Major Babtie and Surgeon-Captain Burnside have proceeded on a tour of service to Malta.

ARMY MEDICAL STAFF.

Surgeon-Colonel William Christy Robinson retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain D. W. Scotland, Officiating Superintendent, Central Prison, Benares, on being relieved, is appointed to officiate as Civil Surgeon, Jalaun. Surgeon-Lieutenant Bruce Gordon Seton, who has completed three years' full-pay service, is promoted to Surgeon-Captain. Surgeon-Lieutenant-Colonel H. Boyd retires from the service. *Bengal Medical Establishment:* The Queen's approval to the promotion of Surgeon-Lieutenant-Colonel A. B. Seaman to Brigade-Surgeon-Lieutenant-Colonel is announced in the *London Gazette* of Feb. 22nd. The Queen's approval of the retirement from the service of the undermentioned officers is also officially announced:—*Bengal Medical Establishment:* Brigade-Surgeon-Lieutenant-Colonel John Burke Gaffney, Surgeon-Lieutenant-Colonel Andrew McMaster Paterson, Surgeon-Lieutenant-Colonel Horace Parr Yeld.

NAVAL MEDICAL SERVICES.

The following appointments are notified:—Fleet-Surgeons: W. R. White to the *Eagle;* E. W. Luther to the *Durham.* Surgeons: A. O. Bobardt to the *Dart;* H. Meikle to the *Rainbow.*

VOLUNTEER CORPS.

Artillery: 3rd Kent (Royal Arsenal): Luigi Walter Alfred Keiffenheim-Trubridge, M.D., to be Surgeon-Lieutenant. 1st North Riding of Yorkshire (Western Division, Royal Artillery): Henry George Outram Collett, Gent., to be Surgeon-Lieutenant. *Rifle:* The Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment): The undermentioned gentlemen to be Surgeon-Lieutenants: Alexander Macdonald, M.B.; Claude Buchanan Ker, M.B. 1st Volunteer Battalion, the Royal Warwickshire Regiment: Surgeon-Captain E. L. Freer to be Surgeon-Major.

VOLUNTEER MEDICAL ASSOCIATION.

At the quarterly meeting of this association, held on Jan. 28th, at 20, Hanover-square, it was decided that the next Ambulance Challenge Shield competition should take place on Saturday, June 15th. Squads intending to compete should apply to the Hon. Secretaries, 20, Hanover-square, W., for the conditions regulating the competition, in which some slight alterations have been made. The new regulation by which regimental bearers are no longer allowed to wear the Red Cross badge was discussed, in consequence of numerous representations from members of the association. The conclusion arrived at by the council was that the regulation was necessary in order that the Red Cross may continue to serve as a protection to non-combatants on active service. The wearing of the badge by men in the ranks was really an infringement of the Articles of the Geneva Convention. The annual dinner will take place on April 24th, the date fixed for the annual meeting of the association.

THE ARMY MEDICAL STAFF EXAMINATION.

The following is a list of the successful candidates for commissions in the Medical Staff of Her Majesty's Army at the recent examination in London:—

Names.	Marks.	Names.	Marks.
L. F. Smith	2580	G. T. K. Maurice	2172
S. H. Fairrie	2410	F. E. Gunter	2077
R. J. Blackham	2352	J. H. Campbell	1819
J. V. Forrest	2245	J. Greeh	1761
H. W. Graham	2188	P. Dee	1756
R. Fawssett	2175	E. G. E. O'Leary	1611

INDIAN MEDICAL SERVICE EXAMINATION.

The following were successful at the recent examination

held in London for commissions in the Indian Medical Service :—

Names.	Marks.	Names.	Marks.
J. Stephenson	3104	R. F. Standage	2250
F. N. Windsor	2811	F. L. Blenkinsop...	2229
P. F. Chapman	2796	J. E. Watson	2155
W. B. Turnbull	2779	H. A. F. Knapton	2118
A. Hooton	2678	C. G. Webster	2004
J. M. H. MacLeod	2653	A. A. Gibbs	1964
E. E. Waters	2518	A. Moore	1963
A. Leventon	2487	G. E. Bensley	1962
A. F. W. King	2374	E. M. Kiewicz	1959

MEDICAL STAFF CORPS IN INDIA.

With regard to the proposed introduction of the Medical Staff Corps into India, put forward in a communication to one of our service contemporaries, we may remark that it is not the first time such a proposal has been made—not that it is any the worse on that account. There is no doubt that it would greatly add to the efficiency in hospital nursing and administration, and at the same time increase the fighting strength of the army in India by not withdrawing soldiers from the ranks (without any hospital training) to act as special orderlies over very sick men. But we are afraid that the military department of the Indian Government are not likely to give practical effect to the suggestion, especially at the present time, on account of the expense. Moreover, the provision of a detachment of the Medical Staff Corps at every military station would require the presence of a considerable strength of that corps in India, with probably a greater liability to sickness and inefficiency than obtains among the native corps and ward servants.

THE FRENCH MINISTER OF WAR AND FRENCH BARRACKS.

The *Army and Navy Gazette* says: General Zurlinden, the French Minister of War, was recently questioned in the French Chamber respecting the outbreak of influenza in Dijon Barracks. He acknowledged that out of 2700 soldiers there had been eighteen deaths, and that 159 men were now in hospital, but he contradicted the rumours of unusual mortality at other places. Here and there he said there were cases of scarlet fever and typhoid fever, but the health of the troops was satisfactory and the army doctors were devoted to their duty. General Zurlinden acknowledged that the allowance of fuel was not sufficient for exceptional winters. He cited a circular issued twelve months ago, in which officers were directed to take precautions to prevent night marches from being detrimental to health.

THE ARMY IN INDIA.

According to the Sanitary Commissioner's Report for 1893 there were only 16 cases of cholera, with 10 deaths, in the whole European army in India in that year; 9 of the cases occurred in Bengal, 6 in Bombay, and 1 in Madras. The year was also about the healthiest on record as far as the native army was concerned; the cholera mortality was only 0·20 per 1000. The chief causes of death were, as usual, in the native army from respiratory diseases.

THE CONTRAST BETWEEN CHOLERA AND NON-CHOLERA YEARS IN INDIA.

There is nothing more remarkable than the contrast which is exhibited in respect of cholera in India between one year and another. The fall that took place in the prevalence of this disease in 1893 was general in almost every Indian province; the mortality from cholera declined from 762,695 in 1892 to 218,113 in 1893. In the case of the Punjab the contrast is very striking. In 1892 the cholera deaths registered amounted to 75,959, whereas in 1893 they only numbered 639.

Correspondence.

"Audi alteram partem."

THE TREATMENT OF ACUTE INTUSSUSCEPTION IN INFANTS: EARLY LAPAROTOMY *v.* INJECTION AND INFLATION.

To the Editors of THE LANCET.

SIRS,—In your last issue you were good enough to publish the report of a case of acute intussusception in an infant upon whom I performed laparotomy with success. In my concluding remarks I urged "that immediate operation should be performed in all cases of twenty-four or more hours' duration." In your introductory remarks you say: "We are strongly of opinion that these measures [injection of air or fluid] should be tried in all cases where the symptoms have been in existence for less than forty-eight hours, and that laparotomy should be recommended if injection has failed." As these views are somewhat opposed to each other I should be glad if you would permit me to state the reasons for the practice I advocate. I have carefully studied the published reports of twenty-six fatal laparotomies for acute intussusception in children of two years or younger. From these accounts it appears that the average duration of the symptoms before operation was three days and a half. In only five cases was the duration of symptoms two days or less. It is instructive to notice the causes of death in these cases. They are as follows:—

Cause of Death in Five Fatal Cases of Laparotomy.

No.	Date.	Surgeon.	Age and sex.	Duration of symptoms.	Cause of death.
1.	1877	Beck	F. 8 months	26½ hours	Acute peritonitis.[1]
2.	1882	Marsh	,, ,,	2 days	Death two days after operation; temperature 106·6° F.[2]
3.	—	Jacobson	F. 11 months	24 hours	Irreducible; operation abandoned.[3]
4.	1885	Horsley	M. 5 months	19 hours	No shock; died cyanosed; lungs congested.[4]
5.	1894	Barker	,, ,,	2 days	Local peritonitis; temperature 107·8°.[5]

[1] Brit. Med. Jour., vol. i. 1894, p. 346. [2] St. Bartholomew's Hospital Reports, vol. xxviii. [3] THE LANCET, June 11th, 1887, p. 1179. [4] Brit. Med. Jour., vol. i. 1894, p. 346. [5] Brit. Med. Jour., vol. ii. 1894, p. 1237.

I have also found records of sixteen successful operations for the same condition.

Successful Laparotomies for Acute Intussusception in Infants.

No.	Date.	Surgeon.	Age and sex.	Duration of symptoms.
1.	1875	Marsh	7 months	13 days (acute 12 hours)[1]
2.	1877	Sands	6 ,,	1 day[2]
3.	1881	Godlee	9 ,,	4 days[3]
4.	1883	Snowball	8½ ,,	24 hours[4]
5.	1889	Barker	F. 5 ,,	2 days[5]
6.	1890	Marsh	9 ,,	20 hours[6]
7.	1890	Kammerer	6 ,,	60 ,, [7]
8.	1892	Pollard	6 ,,	15 ,, [8]
9.	1892	Bruce Clarke	6 ,,	24 ,, [9]
10.	1892	Godlee	4 ,,	26½ ,, [10]
11.	1893	Lockwood	8 ,,	28 ,, [11]
12.	1893	Barker	F. 7 ,,	36 ,, [12]
13.	1893	Pollard	F. 7 ,,	22 ,, [13]
14.	1893	Barker	M. 4 ,,	24 ,, [14]
15.	1893	Verrall	6 ,,	24 ,, [15]
16.	1893	Roughton	F. 4 ,,	24 ,, [16]

[1] THE LANCET, June 11th, 1887, p. 1178. [2] THE LANCET, June 11th, 1887, p. 1178. [3] THE LANCET, June 11th, 1887, p. 1178. [4] THE LANCET, Nov. 3rd, 1888, p. 888. [5] Brit. Med. Jour., Feb. 17th, 1894. [6] St. Bart.'s Hosp. Rep., vol. xxviii. [7] Med. Record, 1890, p. 114. [8] THE LANCET, Oct. 15th, 1892, p. 880. [9] St. Bart.'s Hosp. Reports, vol. xxviii. [10] Brit. Med. Jour., Feb. 17th, 1894. [11] THE LANCET, June 3rd, 1893, p. 1303. [12] Brit. Med. Jour., Feb. 17th, 1894. [13] THE LANCET, Feb. 24th, 1894. [14] Brit. Med. Jour., Dec. 1st, 1894. [15] Brit. Med. Jour., Dec. 23rd, 1893. [16] THE LANCET, Feb. 23rd, 1895.

From this table it appears that the average duration of the symptoms in the successful cases was only thirty-two hours, in no less than 10 of the 16 cases it was twenty-four hours or less, and in only 3 cases was it two days or more. These facts, I think, fully justify my contention, and prove, as far as they can, that if laparotomy is to be attempted with any reasonable chance of success it must not be deferred longer than twenty-four hours from the onset of the disease. I cannot help thinking that the amount of shock caused by abdominal section in these cases has been confounded with that produced by the disease itself, and by the previous unsuccessful attempts at reduction by inflation and injection. I do not

think that the shock of a skilfully and rapidly performed laparotomy is greater than that produced by injection when sufficient force is used to disengage the invagination. The dangers and uncertainty of inflation and injection have been well shown by Lawford Knaggs[1] and Mortimer.[2] I am convinced that a wider appreciation of the dangers of injection and the success of early laparotomy will do much to reduce the mortality of the disease; and this, Sirs, I must ask you to accept as my excuse for having had the temerity to question the views you have expressed.

I am, Sirs, yours faithfully,

Westbourne-terrace, W., Feb. 25th, 1895. E. W. ROUGHTON.

*** We print Mr. Roughton's interesting letter with pleasure, but we still consider that our recommendation of a trial of the injection of air or fluid in these cases previously to abdominal section, where the symptoms have been in existence less than forty-eight hours, a sound one. In careful hands these measures are comparatively unattended with risk, and are likely to be successful in a majority of cases treated within the specified time. We do not recommend that operation should be deferred *after* an unsuccessful attempt has been made at reduction by other means, no matter how recent the symptoms may be.—ED. L.

THE FEVERS OF INDIA AND THE MEDITERRANEAN.

To the Editors of THE LANCET.

SIRS,—I have read with much interest in THE LANCET of Jan. 19th last the Presidential Address in Medicine and Pathology at the Indian Medical Congress by Surgeon-Lieutenant-Colonel Crombie, I.M.S. In attempting to classify the "fevers of India" into specific groups and varieties he has grappled with a question which for years has been a stumbling block in our official nomenclature of diseases, not only in India but in the Mediterranean and elsewhere. In this nomenclature we find: 1. Malarial fevers, subdivided into (*a*) intermittent fever; (*b*) remittent fever; and (*c*) malarial cachexia; a subdivision founded in the two former cases on a single clinical characteristic not confined to any individual specific fever. 2. Enteric fever well known and carefully defined, but having a subheading termed "typho-malarial fever," a combination of malarial and enteric fever. 3. Simple continued fever defined as "continuous fever, having no obvious distinguishing character." Paludism, which has now been fairly proved to be the result of Laveran's hæmatophyllum, is the condition at present commonly accepted as true malarial fever. According to the variety, quantity, or quality of the virus in given cases, so it is believed the pyrexial curve becomes intermittent, remittent, or continuously high, but the disease is of a paroxysmal nature and amenable to quinine. Malarial cachexia is accepted as the result of the prolonged action on the body tissues of the same parasite. Enteric fever, though a well-defined specific fever, frequently runs a most remittent course, while cases of tuberculous suppuration may be most intermittent in type, yet no one would dream of diagnosing either of these pyrexial conditions as "malarial fevers." The greater part, however, of the remaining fevers of tropical and subtropical regions which have not yet been definitely named must, if of a remittent or intermittent character, be classified either with paludism, as malarial fevers, or as simple continued fevers, however many obvious distinguishing characters they may possess. Surgeon-Lieutenant-Colonel Crombie deals with four such types of non-malarial fevers occurring in India, two of which he ventures to think are specific forms. Three types are especially interesting to medical officers serving in Malta, as very analogous forms of fever exist and are endemic in that and other places in the Mediterranean, which for want of better names are in the army with sad irony diagnosed as "simple continued fever" in spite of most obvious distinguishing characters and a difference in duration of any time between two and 200 days' stay in hospital. Paludism these cases certainly are not, as this form of fever is not endemic in Malta, and occurs only in the form of relapses in men who have previously suffered from the disease in Cyprus, India, Mauritius, or elsewhere. They may, however, be intermittent, remittent, or continuously high in pyrexial type, but are non-paroxysmal in nature and unamenable to quinine.

1. The first of these is "simple ardent fever" or febricula, a short fever of from three to six days' duration met with in almost every country, and doubtless specific. 2. Next there is an acute fever of about fourteen days' duration, similar to the form termed "Calcutta or Bombay fever" by Surgeon-Lieutenant-Colonel Crombie. Though diagnosed simple continued fever, it is usually said to be abortive enteric, and in pyrexial curve it resembles a case of enteric fever telescoped into a fortnight. It is, however, devoid of any other clinical resemblance and has every appearance of being a distinct fever. To my knowledge it occurs in Malta, Gibraltar, and Egypt. 3. Thirdly, there is a low form of fever varying between 99° and 101·5° F. (when taken morning and evening), never being normal, and occasionally remaining for from four to six weeks continuously between 99° and 100°. This is generally associated only with anorexia, anæmia, and debility, but may also be combined with neuralgic or rheumatic symptoms. It is not common, and is generally merged into the next class of fevers. Whether it is similar to the "low fever" of Surgeon-Lieutenant-Colonel Crombie and a specific disease I cannot say. 4. Lastly, there is the fever known as Malta, Rock, and Mediterranean fever, pseudo-typhoid, fæco-malaria, &c. It has an irregular course, an indefinite duration, may vary in pyrexial type, but is characterised more especially by its length, tendency to relapse, constipation, anæmia, and rheumatic and neuralgic complications. In severe cases the temperature becomes continuously high, and, combined as they then are with a tendency to the "typhoid state," lead to a similarity in clinical characters to enteric fever. Other cases may in pyrexial curve almost seem to be enteric fever, followed by five or six relapses. The majority, however, are clearly and definitely distinct, and in the few fatal cases (under 2 per cent.) not only are Peyer's patches unaffected, but a characteristic micrococcus, capable of producing a similar fever in monkeys, replaces Eberth's bacillus.[1] Certain cases, again, become intermittent in type, but non-paroxysmal, and resemble the hectic pyrexia of phthisis. Cases of this fever, though diagnosed as simple continued fever in the army, are by the naval and civilian medical men diagnosed as "remittent fever," and together with remittent paludism, and under the heading of malarial fevers.

The time appears to have come when malarial fevers and malarial cachexia should be classified as one group, under such a name as paludism, and be recognised as the results on the body tissues of Laveran's amœbæ, any necessary subdivisions being based on more scientific data than one clinical feature common to many fevers. Let "typho-malarial fever" be also abolished, and such conditions be diagnosed according to the disease at the time the more serious, as would be done in the event of enteric fever occurring in a patient already suffering from constitutional syphilis. This will leave a number of fevers at present termed "continued" without definite names, but these forms will, on account of their obvious distinguishing characters, soon find names when the vague terms "intermittent" and "remittent" fever are abolished. More accurate clinical observation and epidemiological and biological research must soon settle the question, as has been done in the cases of typhus, enteric, and paludic fevers, for every year the circle is closing in. In conclusion, let us hope, with Surgeon-Lieutenant-Colonel Crombie, that England will not yield the palm of discovery to Germany or France in this matter.—I am, Sirs, yours faithfully,

M. LOUIS HUGHES,
Malta Jan. 28th, 1895. Surgeon-Captain, A.M.S.

THE TREATMENT OF INFLUENZA.

To the Editors of THE LANCET.

SIRS,—As we are in the midst of another widely spread epidemic of influenza I should like to call attention to the routine and somewhat reckless use of such drugs as salicin and antipyrin, which I observe is still common in the treatment of this malady. After between four and five years' experience and observations of the effects of various methods of treating influenza I have been unable to resist the conviction that these drugs, while they doubtless relieve some of the most distressing early symptoms, possess no real

[1] THE LANCET, June 4th, 1887.
[2] THE LANCET, May 23rd, 1891.

[1] THE LANCET, Dec. 12th, 1892, and Annales de l'Institut Pasteur, August, 1893.

antitoxic influence over this affection, and not only leave the patient exposed to all the serious after-effects of the influenzal intoxication, but even render him more susceptible to some of them. The drugs, which I notice are now often prescribed in combination, are all the more dangerous, because their immediate effects are usually pleasant both to the patient and the practitioner. The patient is pleased to have the more painful symptoms speedily relieved and the practitioner is pleased to have the credit of being able to relieve them. But patients who have been thus treated often have a tedious convalescence, and are very subject to recurrent attacks of cardiac debility as well as to other serious sequelæ. I have often been struck with the pale, exhausted, worn, and shrunken aspect of some of these "convalescents." On the other hand, both clinical and experimental evidence point to quinine as a true antitoxin in influenza. No doubt many persons complain much of certain disagreeable effects which full doses of quinine occasionally produce; but these should, in most cases, be looked upon as a small evil compared with the grave after-effects which are especially apt to occur when quinine has not been adequately or suitably administered. In malarious countries no medical practitioner would feel justified in withholding quinine because of any supposed "intolerance" of that remedy. I have elsewhere pointed out how much better quinine is tolerated by many persons, and how much more beneficial its action appears to be when given in combination with an alkaline saline; but my object now is to point out that the use of such drugs as salicin and antipyrin should be restricted to two or three doses given simply for the relief of the pains attending the onset of the disease; that they are harmful if given freely and as a matter of routine; and that we should rely mainly upon quinine as a proved antitoxic agent in this disease. The present widely diffused outbreak on the cessation of the protracted frost seems to point to the sudden mobilisation of the imprisoned bacilli, or possibly to the suspension of their infective activity during the prevalence of the very low temperature.

I am, Sirs, your obedient servant,

I. BURNEY YEO, M.D., F.R.C.P.,

Professor of Clinical Therapeutics in King's College.

Hertford-street, Mayfair, Feb. 25th, 1895.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."

To the Editors of THE LANCET.

SIRS,—The only comment necessary upon Sir George Johnson's last letter is to remark that the words following Dr. Halliburton's statement about there being enough to convince the impartial observer that a small quantity of glucose is obtainable from normal urine did not stand in the position of being held back by me, inasmuch as the text in full had been the previous week before your readers. Passing to Dr. Halliburton's letter, I am asked to amplify my position with respect to the detection of alcohol by the chromic acid test. This matter was incidentally introduced in a quotation from the Guy's Hospital Reports for 1876 detailing the application of the fermentation test at a meeting of the Royal Medical and Chirurgical Society in 1875. It is perfectly true, as stated by Dr. Halliburton, that a number of volatile organic principles react with chromic acid in the same manner as alcohol; but I doubt not that Dr. Halliburton will admit that to get the reaction one or other of these principles must be present, and that for their presence there must be a source for them. Now, the product submitted to the action of the fermentation test consisted of an aqueous solution of the extracted sugar obtained by liberation from its lead compound, and the solution had been previous to employment concentrated by evaporation in an open capsule. Hence, if it had been possible—and I contend it was not—for one or other of these principles to be present it would have been dissipated in the process of evaporation, leaving the alcohol generated by fermentation as the only agent permissible to look to for the reaction that was observed. Dr. Halliburton's invitation to enter upon a discussion of the question of kreatinine I am not tempted to accept. I am, Sirs, yours faithfully,

Grosvenor-street, Feb. 27th, 1895. F. W. PAVY.

*** This correspondence must now cease. If none of the parties to it have exactly convinced each other, they have made sufficiently clear the points at issue between them, and it is possible that the debate between authorities so well qualified to hold strong opinions on the subject will stimulate others to assist the profession at arriving at a definite conclusion on a very interesting point.—ED. L.

"THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—Dr. Lovell Drage has hitherto written so ably on the question of midwives' registration that I was disappointed on reading his letter to find only a *réchauffé* of the old stock arguments. However, the very pertinacity of their appearance demands a categorical answer. We are apparently now all agreed that something must be done, but to be effectual what is done must be done with the consent of the great majority of the profession, and must have its cordial support. Again, we are mostly agreed that proper education and efficient control are the points aimed at. The Obstetrical Society have endeavoured to fulfil the first condition, but are absolutely helpless as regards the second, and it is with a view to obtaining this power of control that registration is asked for. I admit that the present method of granting diplomas by the Obstetrical Society has great drawbacks, but accept it on the principle that half a loaf is better than none. It would be surprising if no fault or omission could be found in the regulations for an examination, but in the instance quoted the society have evidently very properly shown their appreciation of the defect by the issue of the circular mentioned. Dr. Drage complains that certain representations on the subject have been unheeded. I thought they were old and well-known friends. The first statement as to mortality statistics is weakened by the want of a full knowledge of all the factors, without which any figures become little more than decorations for a discussion. We want to know the rates before there was State control. We want the rates both in those cases attended by registered midwives and in those attended by uneducated midwives. We at least should know the proportion of cases attended by the State-controlled midwives, especially as we are told in the next paragraph that the system has not resulted in removing the unqualified practitioner. It must be remembered that it is not only or chiefly mortality-rate, but sickness-rate, both direct and indirect, that we have to consider. Registration, I admit, will not immediately or absolutely remove the unregistered practitioner. We are reluctant to interfere with vested interests, so the continuance and maintenance of untrained midwives constitute one of those difficulties that are inseparable from the establishment of a new system. How long it will last and how much it will flourish will depend on the support which any new system receives from the profession whose duty it will be to educate the people to an appreciation of their danger and the ways of safety; therefore am I most anxious that some means may be found of settling this vexed question. That midwives do not send for the surgeon for the repair of the perineum must be a fault of education and training, but one that may apply to not a few qualified medical men in large practice; but, even admitting this fault, the midwives at any rate know the danger, and are in a better position to rectify it than a nurse without any education. Secondly, it is objected that of the 2000 diplomates of the Obstetrical Society few are found practising among the poor except as the employés of institutions or charities. This is surely the best thing that could be wished for; here we have the desired condition of control, and very efficient it is, and what, may I ask, could these charities have done without the much-reviled society to select efficient midwives for them to employ? It is doubtful whether a trained midwife in a country district would be able to earn a sufficient competence to make it worth her while to go through a comparatively expensive training. And I believe that a solution will be found in the village nursing associations that are now coming into existence in so many places, and which guarantee the expenses of a nurse who is both district nurse and midwife, and I trust that the time may come when the guardians of the poor may see fit to act in the same capacity as the nursing associations. But we shall never get out of the difficulty if we wait for the perfection that is shadowed in Dr. Drage's third statement, that midwives shall not be certified because "certified midwives have been found guilty of criminal practices"; surely not our own or any other profession or any class of society in this

world can claim the required maiden record of virtue and blamelessness. Whatever may be done, I trust the little help we have in the finding of efficient midwives for the poor may not be taken from us until something better is provided.

I am, Sirs, your obedient servant,

Freshford, Feb. 25th, 1895. CHAS. E. S. FLEMMING.

To the Editors of THE LANCET.

SIRS,—Dr. Playfair, in his letter in THE LANCET of to-day, has appended the form of "diploma" issued to midwives by the Obstetrical Society of London, but he has not informed us how the women obtain their knowledge of the art to be considered by the society skilled midwives "competent to attend natural labour." At our lying-in hospitals in London, and at the celebrated Rotunda in Dublin, their certificated midwives are required to undergo practical training &c. in the wards before they are considered eligible to offer themselves for examination, which necessarily goes very far to render them "competent." But if the respective candidates for the Obstetrical Society's "diploma" are relieved from this highly essential mode of acquiring experience in this most important branch of the medical profession, but are simply admitted to examination after "cramming" from one of the smaller manuals upon the subject, that is quite another matter, which, I maintain, would be insufficient to make them competent "to deal with a natural labour," for even this natural process would assuredly mislead them sooner or later. Wherefore is there any need for the "diploma" of the Obstetrical Society of London at all—excepting from a purely financial point of view—when the above recognised excellent institutions grant them after a searching ordeal? We may yet look forward to the Medical Society of London awarding to candidates a diploma in medicine and the Royal Medical and Chirurgical Society a diploma in surgery! Undoubtedly these societies have quite as much power to do so.—I am, Sirs, yours faithfully,

Putney, S.W., Feb. 23rd, 1895. J. FRENCH BLAKE.

To the Editors of THE LANCET.

SIRS,—Dr. Playfair is apparently content with the policy of evasion so characteristic of the friends and allies of the Midwives' Institute. He will perhaps pardon me for stating that it is not a question of my views, it is a question of facts. As he cannot upset the facts put forward, he talks of dialectic devices. The plain truth of the matter is, the Midwives' Institute and its confederates, not being able either to show in any way that the Continental system of midwifery practice is anything but a bad one, or to support their views in public successfully, are attempting to introduce this system by subterfuge. The action of the General Medical Council, if justified by nothing else, is so by the slipshod method of examination carried out by the Obstetrical Society. The council of that society intend by their diploma to show that the holder is fit to practise ordinary midwifery. That it is used as a diploma for practice was demonstrated to that council. If the intention of the majority on that council is not to induce their licensees to practise ordinary midwifery, why will it not agree to make it quite plain that the certificate or diploma does not entitle the holder to practise midwifery? Their policy is one of evasion; they intend to issue such a certificate with definite intention; they procrastinate so as to bring a little lobbying influence to bear on the members of the General Medical Council. Wrapt up in true College of Physicians dignity, Dr. Playfair is quite content to tell the House of Commons that he has not paid the same attention to the subject as he did twelve years ago, but that his impressions are those of the profession; that his opinion is that because midwives are recognised by the State in some countries therefore they should be so in this country. In fact, like the College of Physicians practitioner of 150 years ago, he conceals ignorance by an outward appearance of great wisdom. I am, Sirs, yours faithfully,

Feb. 25th, 1895. LOVELL DRAGE.

"LIFE ASSURANCE SCHEMES."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 16th, in an annotation entitled "Life Assurance Schemes," a comparison is instituted between the Royal Exchange Company's new policy and the debenture policy of the Mutual Life Insurance Company of New York. I venture to suggest that the writer has not made himself acquainted with the nature of that policy as issued by this company. He asserts that under our policy "part benefit only is enjoyed" during the first twenty years, whereas, as a matter of fact, if the death occurs after payment of the first premium the whole of the benefits vest at once. It is also his mistake to suppose that "one-half only of the sum assured becomes payable" at death, "the payment of the other half being deferred for twenty years upon payment in the interval by the company of interest on the withheld balance at the rate of 5 per cent." The policy is much more simple. It provides that whenever death occurs the beneficiary becomes entitled to 5 per cent. upon the full amount insured for twenty years, and the capital amount assured at the end of twenty years. The assured may, in addition, contract for a guaranteed progressive bonus during the first twenty years, but this is an option not confined to our debenture policy. It is not my suggestion that this is a policy in anywise comparable with that issued by the Royal Exchange. We seek to give an increasing insurance for a fixed annual payment—that office offers what appears to be decreasing insurance. I may, however, be allowed to point out that when the writer says the object of the English company is "to give as large an immediate return as possible upon the premiums charged, and for this purpose the distant future is sacrificed to the near," it is only by the immediate death of the assured that an immediate return can be had, the argument being that the assured must die to gain. We seek to make his assurance valuable, whether he lives or dies. The writer says: "It is a grievous mistake to be led away by the prospect of personal advantage in the distant future from making the largest possible provision for the contingencies of the near future." Now, the function of the medical officer in life insurance is to make the "contingencies of the near future" available only to the few, while the distant future is certain. The advice given would mean that a man should make up his mind to die in the near future, and fix a term within which it should occur, and then insure for that term—e.g., a man aged thirty, believing he will die within five years, if he can get assured would have to pay us only £13 15*s.* 10*d.* for £1000. If he died before his second premium fell due his estate would gain £986 4*s.* 2*d.* Under the Royal Exchange policy he would be charged £15 5*s.*, and his estate would gain only £978 1*s.* Thus the Royal Exchange method is not the cheapest for a man who is prepared to back his early death. But this is not pure life insurance. It is a gamble.

If it be true, as stated, that the Royal Exchange method "may probably have the effect of cancelling the insurance in the case of persons who live to extreme old age," I can only say that my company would not compete for such a result. Our policies are "very distinct in character," as you truly state. I am, Sirs, yours truly,

D. C. HALDEMAN,
General Manager of the Mutual Life Insurance Company of New York.

Cornhill, London, Feb. 25th, 1895.

*** It is odd that our correspondent should complain. We said that one-half of the sum assured remained on credit with the company for twenty years after the death of the life assured. He says that the whole amount is so withheld. Be it so. The correction is material, but does not make the scheme of assurance in question any more attractive, for a round sum of money in hand is often in the circumstances contemplated a priceless boon to widow and orphans, against which a 5 per cent. investment simply does not count. The very old gibe that a temporary life assurance is "a gamble" ought really to be superannuated now. It has been so often refuted and is so obviously devoid of point as to be no longer fit for work. Of course, Mr. Haldeman's company may refuse to compete for such business—that is a question for his directors,—but he assumes too much when he assumes to scold at the customers of other companies who, knowing what they want in the way of life assurance, elect to go where they can get it.—ED. L.

COLOUR VISION AND ACCIDENTS.

To the Editors of THE LANCET.

SIRS,—For many years keen attention has been paid to this question and examinations instituted. Has any ccident

during this time been brought home to defect in colour vision? Has any railway servant found by Holmgren's test to have defective colour vision been confronted at night with red and white lights and failed at once to distinguish one from the other, and to state correctly which was white and which was red? Has any similar fact been established as to red and green lights in the case of sailors? Perhaps I should have used the plural, because if the statements as to that which may be true are true, there should by this time be abundant evidence of the fact.

I am, Sirs, yours faithfully,

Queen Anne-street, W., Feb. 26th, 1895. W. R. GOWERS.

"HOSPITAL SMALL-POX INFECTION."

To the Editors of THE LANCET.

SIRS,—Under the above heading at p. 361 of THE LANCET of Feb. 9th you refer to the occurrence in 1893 of two cases of small-pox amongst the patients in the scarlet fever pavilion of the Stockport Isolation Hospital, the first of which was primarily attributed to the fact that a cat secretly kept in the scarlet fever pavilion had visited the small-pox pavilion, though *both* cases were ultimately believed to be the result of direct communication between these pavilions by means of a tunnel or subway, 77 ft. in length, for the heating pipes, the existence of which was subsequently discovered. In questioning the soundness of this conclusion you object that: 1. "Nothing is said as to the condition of the patients as to vaccination." Your point is not quite clear to me, but the facts are as follows:—Case 1: Aged two years and a half; admitted Jan. 13th; papular rash Feb. 15th. Two rather faint vaccination marks on the left arm, each slightly smaller than a threepenny piece. Small-pox well marked and ended fatally on Feb. 18th. This child had a tuberculous knee-joint with sinuses. Case 2: Aged seven years; admitted Jan. 23rd; papular rash Feb. 28th; three good vaccination marks on left arm almost exactly the size of a sixpenny, a shilling, and a halfpenny piece respectively. This patient on admission was suffering from diphtheria, and was isolated in a separate small ward of the scarlet fever block. This small ward freely communicated with the scarlet fever ward proper, and this child when convalescing from diphtheria developed scarlet fever, and was then put in the scarlet fever ward in which Case 1 and several other children were under treatment. Upon the occurrence of Case 1 all children over seven years of age in the scarlet fever pavilion were at once revaccinated, with the single exception of Case 2, whose marks were so large and good that her revaccination was not considered necessary. 2. You suggest that Case 2 may have derived its infection from Case 1. This is of course possible, and even probable judging from the dates, but it does not, I submit, in any way weaken my contention as to the mode of primary introduction of infection to the pavilion. 3. You say: "And, again, may not both cases have derived their infection aerially?" Certainly, I have not the least doubt that they did so—Case 1 directly from the small-pox pavilion through the underground passage, and Case 2 either in the same way or from the air of the ward infected by Case 1. The odour of oil of peppermint poured with boiling water into the aperture of exit of the heating pipes in the small-pox pavilion quickly pervaded the whole of the scarlet fever pavilion, and this, together with the significant fact that no further case of secondary small-pox occurred after two brick partitions faced with cement concrete had been built across the tunnel of communication, leaves no doubt whatever in my mind as to the part played by the tunnel in question.—I am, Sirs, yours faithfully,

Stockport, Feb. 20th, 1895. CHARLES PORTER.

"ANÆSTHESIA BY THE CHLOROFORM AND ETHER MIXTURE."

To the Editors of THE LANCET.

SIRS,—Allow me briefly to reply to the kindly comments on my paper with the above heading made by two skilled anæsthetists. I have repeatedly heard it alleged that in giving a mixture of ether and chloroform in an inhaler you are working with a vapour composed of the same proportions of its constituents as exist in the liquid form. It was to show the fallacy of this belief that I made the researches detailed in my paper. I there proved that in working with such a mixture you were giving an inhalation varying continually in the relative percentages of its constituents, and I expressed my belief that to use such a mixture was unscientific and unsafe. When dealing with lethal weapons let us know at least what we are using. I should not like your readers to infer that this mixture is, as one of your correspondents suggests, my mixture at all. I have seen it much used here and I have heard of it being largely used elsewhere, but, of course, the A.C.E. mixture is the much more commonly used one. I had this mixture in my mind's eye, but expressly avoided examining residues from such for the following reasons. 1. If variations in the strength of inhalations were shown to result from mixing two liquids, *a fortiori* would you get such variations from mixing more than two together? Let us always begin by the simpler hypothesis. 2. As algebraists well know, to calculate values of X and Y is an easy matter; to calculate values of X, Y, and Z is far more arduous. The relative amount of ether and chloroform can be easily calculated from the specific gravity. In the case of three liquids soluble in each other it is possible, perhaps, to calculate the percentage of each from the volume and density, but it is a task beyond my powers. The three might be separated by fractional distillation; or an estimation might be made by distilling off the ether by a gentle heat and oxidising in half the residue the alcohol into acetic acid and titrating with alkali, whilst in the other half the chloroform would be converted by boiling with caustic potash into chloride and formate of potassium. These methods would take a considerable time—much more than I could well spare.

As to what would most likely take place with the A.C.E. mixture in a Clover's inhaler, the relative rate of the three constituents are: alcohol 100 ether 78·7, and chloroform 62. Ether boils at 35°C. (95°F.), and will generally be gently boiling in a Clover if the room is warm—warm as operating rooms usually are. The boiling points of chloroform, 62·7° C. (145° F.), and alcohol, 78·5° C. (173° F.), are too high to enter into the question. The low boiling point of the ether would probably compensate for its less diffusion power as compared with alcohol, and the two vapours might to some extent correspond in amount to each other. The chloroform, handicapped by its low diffusion rate and having no low boiling point to help it onwards and upwards, would linger longer, becoming stronger and yet stronger, until at last, like Astræa, "ultima terras relinquit." My conclusion is that when mixtures are administered homogeneity of inhalation is only possible when the anæsthetic is added by drops on to the face of an open mask; that, in fact, mixtures should not be given in a closed inhaler.

I am, Sirs, yours faithfully,

Derby-road, Nottingham, Feb. 23rd, 1895. EDGAR B. TRUMAN.

BEAVEN RAKE MEMORIAL FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow us to inform your readers that the subscription list of the above will be closed next month, and that it has been decided to spend part of the money in the erection of a memorial tablet in Guy's Hospital Medical School and to hand the balance to Dr. Rake's widow and children. It may have been supposed that the latter were sufficiently provided for under the will of the elder Dr. Rake; we therefore wish to say that the small extent to which they become beneficiaries was known to us, and that the whole question was considered at two meetings of the committee before the appeal was drawn up which you kindly inserted in your columns. The treasurer of the fund, Dr. Pye-Smith (48, Brook-street, W.), will still be glad to receive contributions from other friends who appreciated the character and work of the late Dr. Beaven Rake, but who have not yet subscribed to the memorial.

We are, Sirs, yours faithfully,

PHIN. S. ABRAHAM
GEORGE A. BUCKMASTER } Hon. Secs.
ALFRED RAKE.

THE CHELSEA HOSPITAL FOR WOMEN.

To the Editors of THE LANCET.

SIRS,—Not having been re-elected to the post of anæsthetist to the Chelsea Hospital for Women, I feel I should like, with your permission, in justice to myself to state the circumstances of the case. When the staff resigned in consequence of the report of the Committee of Inquiry, as no questions of the anæsthetic work of the hospital had been raised it did not seem necessary for me to resign my post. In December,

however, the treasurer represented to me as everyone had resigned it was desirable that I should do so, and I fell in with his suggestion. In due course the applications for the in- and out-patient staff were advertised for, but the post of anæsthetist was not advertised for till Feb. 2nd. My application therefore did not come before the Medical Selection Committee in the early part of January. Although the board advertised that candidates must not be engaged in general practice I applied for re-election, stating I had served the hospital as anæsthetist for three and a half years and that I had had no fatal case. There has never been any fault found with my work. I claim to take all necessary care as regards antiseptic precautions, and I fail to see that my work as a practitioner should disqualify me for a post which I have held with success for so long. I am, Sirs, yours faithfully,

ANDREW FAUSSET, B.A., M.B., B.Ch. Dub.

Belgrave-road, S.W., Feb. 25th, 1895.

"THE DANGERS OF STREET PENNY TOYS: A PROTEST."

To the Editors of THE LANCET.

SIRS,—With reference to your annotation concerning the danger of cheap toys and the possibility of diffusion of disease by the mouth, allow me to remind you of an instance of the kind reported in the French press somewhere about 1877. A number of persons having become infected with syphilis by the mouth, an inquiry was made which led to the discovery that they had all been in the habit of smoking cigars from the same manufactory, where the finishing touches (adjusting the edges of the outside leaf, shaping the point, &c.) fell to the share of some young women suffering from specific disease of the mouth or lips. The conclusion is obvious. I am, Sirs, yours truly,

Feb. 25th, 1895. X.

"THE REMUNERATION OF THE RESIDENT OFFICERS IN ST. BARTHOLOMEW'S HOSPITAL."

To the Editors of THE LANCET.

SIRS,—I am sorry that my expression "a good time" should have clashed with "Fair Pay's" idea of why one tries to get on the junior staff. I quite agree with him that one does not do so with the object of having a good time. I was thinking that a year on the junior staff at St. Bartholomew's is worth four or five at a small hospital, for in the former case one learns how to work with colleagues of many and varied temperaments; in the latter, one has at the most two colleagues and often only one. To go back to the point of pay. The resident officer is in residence for six months—say, twenty-six weeks—and pays about £1 per week for his food. Therefore in twenty-six weeks he pays £26 for food.

Now, as far as I can see (my authority is the advertisements at the end of the Medical Directory), no single hospital with a school attached pays its junior residents any salary, though they feed them, and most of the appointments seem to be for only three or six months. The St. Bartholomew's junior officer is in office twelve months and in residence six. In those six he pays £26, and for his year's work he receives £25. This works out to much the same as if he got no salary and was boarded. Again, "Fair Pay" says that I know that men resident in a hospital have no opportunity of broaching the subject, nor would they be listened to. I know nothing of the kind, but I do know that when I was in residence I and one of my colleagues initiated several reforms affecting the junior staff, and that the committee were uniformly courteous and obliging, and that about a year after we left the reforms were completed. As to "R.M.O.," what does he mean by saying that I have learned that relations with other medical men are to be regulated by supply and demand in its money sense? The only meaning I can attach to his words is that the senior members of the staff have a pecuniary interest in their house physicians or surgeons not being paid more. If I have put a wrong construction on his words I will apologise in advance, but I can attach no other meaning to them. I cannot see that it is more expensive to be on the junior staff of St. Bartholomew's than that of any other hospital with a school; and not only the experience, but the fact of having held such an appointment is invaluable. If the hospital were to pay the junior staff the full value of their services it would get off cheaply at £2000 or £3000 each, for the hospital work could simply not go on without them, but the same might be said of the cook or the porters.

I am, Sirs, yours faithfully,

AN OLD HOUSE SURGEON OF ST. BARTHOLOMEW'S.

Feb. 25th, 1895.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Date of Hospital Sunday at Liverpool.

MUCH difference of opinion prevails as to the proposal to alter the date of Hospital Sunday from the second Sunday in the year to another one later in the year, when the weather may be expected to be less wintry. On the one hand it is contended that the result could not be worse and might be better, that the present Sunday is too near the Christmas and New Year's festivities, and also too soon after quarter-day and the inevitable quarterly bills; and on the other hand it is urged that the present date has been followed for twenty-four years, during which period a sum of £167,508 has been raised by the Sunday collections alone, an average of £6979 annually; and such being the happy result it would be better to leave well alone. Although the weather this year was exceptionally severe and the depression of trade worse than it has ever been before, the collections are expected to reach £6000, the unfavourable circumstances just noted having combined to raise much sympathy towards the hospitals and other medical charities. Then there is the risk of dislocating a custom of such long standing, and the fear that it may cause some permanent defaulters. The matter will be fully considered by the committee before the next anniversary comes round.

The Weather and the Distress.

Within the last few days the severity of the weather has considerably abated, and consequently the distress among the poor has been less acute. Nevertheless, the stream of benevolence still flows on, large numbers of persons being relieved, mostly in food, coals, &c. The distribution of money through the police and through the Central Relief and Charity Organisation Society prevents it being squandered on undeserving persons, of whom there must always be a large proportion in such a city as this. There are always benevolent persons ready to give alms to any applicant, and as a natural consequence there are always beggars. Organisation and charity are perfectly compatible, and no one can know better than medical men what are the evils of indiscriminate almsgiving.

Lord Chief Justice Russell.

The Lord Chief Justice is expected to preside in the Crown Court at the Assizes to be held here next month. As is well known, his lordship—first as Mr. Charles Russell and subsequently as Sir Charles Russell—was for many years attached to the Northern Circuit, and in no part of it was he better known than in Liverpool, which has been the scene of many of his forensic triumphs.

An Atrocious Murder.

At an early hour one morning last week a boy seriously wounded came out of a house and gave the alarm to some men that an old man in the same house had been murdered. The boy then fainted, and was conveyed to the Northern Hospital, where he still remains in a somewhat critical state under the care of Mr. Damer Harrisson. The old man was found dead, having received very severe wounds, causing great hæmorrhage. The inquest has been opened by the City Coroner and adjourned, Mr. Frank T. Paul, lecturer on medical jurisprudence, having made the examination of the body at the request of the coroner, together with the examination of the blood-stained weapons found by the police. The injured boy recovered consciousness and was able to give a description of his assailant and to identify a man whom the police arrested later as the man who assaulted him. The case has naturally attracted much excitement, but further comments must be left till after the inquest and magisterial investigation.

Feb. 26th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Egremont.

MR. SAMUEL BRAITHWAITE, J.P., has been elected first chairman of the Egremont Urban District Council. Mr. Braithwaite studied medicine at the University of Durham College of Medicine at Newcastle-upon-Tyne, and has been in practice at Egremont since 1876, in which year he succeeded Dr. Lawson. Since 1885 he has filled the post of chairman of the local board. He is surgeon to the local rifle corps, and has been lieutenant and captain; he is also member of the West Cumberland Fishery Board, and director of the Gas Company, and he was Master of the Egremont Otterhounds. He is, besides, a hard-working medical practitioner. No man in the district is held in greater esteem than the chairman of the Egremont Urban District Council.

Durham.

The University Journal, which has hitherto consisted of some six or eight pages, is to be enlarged to thirty pages, and is to be run on somewhat different lines. The College of Medicine and the College of Science at Newcastle are each to have an editorial staff, and in the journal will now appear all matters of interest and importance to those two institutions. Professor Glines, the new principal of the College of Science, has taken great interest in promoting this movement. It is hoped that this journal may become the official gazette of the University. It will be subsidised by the colleges at Durham and at Newcastle.

The Heath Surgical Scholarship.

The late president of the College of Medicine, Professor G. G. Heath, left in trust the sum of £4000 for the purpose of founding a scholarship in surgery to be awarded every second year. The value of this scholarship will be some £200, and regulations are about to be issued by the trustees. The competitors must be graduates of Durham University. It is anticipated that there will be keen competition for this valuable prize. This will be the first competition.

The Newcastle College of Medicine.

The office of secretary has become vacant by the resignation of Mr. H. Fox, R.N., and the appointment will be advertised at once. The Council of the College has recently introduced the electric light into the building, and the dissecting-room, lecture theatres, council chamber, and the corridors are now all illuminated by electricity.

The Cumberland and Westmorland Asylum.

Carlisle is a city constantly referred to in old ballads by the epithet "merry." I am reminded of this by the report of a speech made by Mr. Carrick of Scotby in his candidature for the county council. Mr. Carrick is a member of the Lunacy Committee, and in his speech made some very remarkable and interesting statements. For the last two years the recovery-rate at the Carlisle Asylum had been—for 1893 45 5 per cent., as against the average in English county and borough asylums of 39 per cent.; and for 1894, 47 9 per cent., as against 37 3. The average rate of recovery on total admissions for the last twenty-two years had been 45 7 per cent. The committee had considered the 4*s.* grant for pauper lunatics, and had applied to have it extended to pauper patients outside the workhouse, as in Scotland. A large building for private patients, who would otherwise have to pass through the asylum as nominal paupers, is in course of construction, and altogether Carlisle seems to be exceptionally fortunate in her treatment of lunatics and her choice of those who look after them.

Feb. 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medico-Chirurgical Society.

THE discussion at this society on cardiac therapeutics was resumed last Wednesday before a considerably smaller audience than on the first night of the discussion. Dr. Bramwell opened in a long and somewhat too exhaustive paper on the whole subject, which occupied the first hour. He was followed by Dr. Stockman, who took a somewhat negative line of criticism. Professor Greenfield extolled in the highest possible way the value of strophanthus as against digitalis. Dr. James Ritchie referred to various points which he had gleaned from his experience in general practice. Dr. William Russell aimed at delimiting the sphere of applicability of digitalis and strophanthus. Dr. Clouston referred to the circulatory troubles in some forms of insanity, and indicated the treatment he adopted for these cases.

Influenza in Edinburgh.

There has been quite an outbreak of influenza in epidemic form in Edinburgh. It first made its appearance some ten or twelve days ago, when the first indications of thaw appeared. It is very prevalent amongst all classes. The seizures are, as a rule, quite typical, although it is at the same time accompanied by such mild cases that, occurring alone, they would be classed as febrile catarrhs. Fortunately, the lung complications do not, so far, appear to have been serious. Bronchitis is common, but pneumonia not so common or so fatal as it was a few winters ago. Still, the death-rate is high, and the number of deaths from diseases of the chest is large.

Health of Edinburgh.

The death-rate last week was 36 per 1000. Out of a total death-roll of 188, 115 were due to chest diseases. Amongst the deaths were 20 cases from measles and 2 from small-pox. The intimations for the week included 683 cases of measles, 1 of small-pox, and 35 of scarlet fever.

Royal Edinburgh Asylum for the Insane.

The annual meeting of the corporation of the Royal Edinburgh Asylum for the Insane was held on Feb. 25th, Lord Provost McDonald presiding. The treasurer read a report showing that the institution had a surplus of £4717 14*s.* 6*d.* The physician superintendent (Dr. Clouston) read his report. He drew attention to the increase of general paralysis, but on the whole mental disease was not increasing. He also referred to Dr. Bruce's investigations as to the treatment of certain kinds of mental disease by thyroid feeding, and he looked forward with much confidence to the good which this plan of treatment would accomplish.

Recent Medical Appointments in Glasgow.

Certain medical appointments have recently been made in Glasgow under circumstances which have not given universal satisfaction. The University Court has instituted two new medical lectureships, and has filled them without advertising for candidates. The directors of the Western Infirmary have filled three vacancies in their staff, and, without disparaging the merits of the successful candidates, it seems to me that certain of the unsuccessful candidates had higher academical claims. It is always a pity when appointments can be made the subject of this sort of comment. It places the new holders of the posts in an unpleasant position and exposes the other gentlemen to an imputation of jealousy. The most obvious remedy would be that the meetings of the Glasgow University Court and of the board of directors of the Western Infirmary should be held in public, as is already the case as regards the meetings of the University Court of Aberdeen and those of the directors of the Royal Infirmary of Edinburgh.

Feb. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dublin Sanitary Association.

AT the annual general meeting of this association the incoming president, Dr. J. W. Moore, in the course of his address referred to the outbreak of small-pox in Dublin, and said that the public at large do not appear even yet to realise the priceless boon which vaccination has conferred upon mankind since the memorable day—May 14th, 1796—on which Edward Jenner vaccinated a peasant lad whom he failed to inoculate with small-pox two months afterwards. Before the introduction of vaccination the annual mortality from small-pox in England and Wales was at the rate of 3000 deaths in every 1,000 000 of the population. In 1891 the population was 29,081,047 and the death-rate from small-pox would represent an annual loss of some 87,000 lives. What were the actual facts? In 1890 small-pox caused only 15 deaths in England, while the annual number from this disease in the ten years 1881–90 inclusive was 1227—that is, one-eightieth only of the death-rate of pre-vaccination times. Dr. Day, resident medical

officer of the Cork-street Fever Hospital, had recently stated that in not one of 488 patients suffering from small-pox, who had been admitted to the wards of that hospital from the beginning of the present outbreak in Dublin in July, 1894, up to Dec. 31st, was there the smallest evidence that revaccination had been successfully performed within twelve months previous to the development of the disease. The most noticeable feature and the strongest point in favour of vaccination is that, of the 37,000 children in the Dublin Registration District under five years of age, the vast majority of whom are known to be vaccinated, only 22 have died from small-pox during the present epidemic, and none of these 22 were protected by vaccination.

Miscarriage of Medical Charity in Dublin Hospitals.

At the recent meeting of the Dublin Branch of the British Medical Association Dr. H. C. Tweedy read a paper on the above subject. In the course of his remarks he said that the medical press had been lately dealing with the question of hospital abuse. The discussion of such a topic should be productive of good results, and it showed that the public were taking an increased interest in the hospitals, and were determined on rendering them as perfect as they might be in their general working. A comparison of the minute books of hospitals of the past with those of the present day gave striking illustrations of how in the matter of order and management hospitals had advanced during recent times. No longer now did they find the governors mere figureheads who never attended when any useful business was to be done, but turned up with unfailing certainty when some job was to be perpetrated. In other respects, also, hospital management had advanced greatly, and the hospital patient had a far better time of it than his brother or sister of days gone by. But there was a danger that the tide might overstep its natural bounds. The title of "hospital patient" had of late become abnormally elastic; the general public had been developing a tendency to avail themselves of the use of the hospitals to such an extent and in such a manner as were never contemplated by the pious intentions of the founders. In the two departments of the hospital—in the pay wards, and to a great extent in the extern dispensaries—were to be found as patients persons who could not be considered as having reasonable claims on public charity. The pay wards were originally established to meet a great want for the needs of a large class of people, such as ladies in reduced circumstances, who could not be expected to pay a large fee. But now the privilege was being usurped a good deal by a class of patients not having the most remote claim on public charity. Officers, country gentlemen and their wives, and others such as these were availing themselves of these pay wards. Their presence in the hospital at all as patients was strongly to be deprecated, for not only were they getting beds intended for a deserving and suffering class of people, but a great injustice was also inflicted on the medical and surgical staff, who had to attend them gratuitously. If pay patients were to be taken into hospitals at all their circumstances should be rigidly inquired into, and none taken except those who could not otherwise pay for the advice and nursing that they needed. Dr. Tweedy advocated the establishment of a private hospital in Dublin of the type found in Berlin and other places, and he believed that such would work with profit. The district which made up the Dublin hospital district had a population of 356,240 persons, and they found that the total number getting medical relief through the hospitals during the year was 171,897 persons, or 482 out of every 1000 of the population of the district, nearly one-half of the whole.

The Battle of the Clubs at Cork.

Large posters announced that a meeting of citizens was to be held on Thursday, Feb. 21st, for the purpose of "considering the crisis created by the doctors' circular." Members of benefit clubs and their friends were invited; for others admission was regulated by ticket. The janitors discharged their discriminating duties efficiently, and the proceedings inside were harmonious. The list of notabilities published in the morning papers showed that it was a representative meeting of the clubs and nothing more. The attempt to give the meeting the appearance of a general gathering of citizens by bringing the Mayor there to preside proved a failure. A deputation waited upon the civic authority, but he could not see his way to identifying himself with the proceedings. The chairman told his audience that they found it necessary to put on a levy of 6*d.* per member, but he did not add that the rich man with £800 a year paid the extra 6*d.* just the same as the poor man with £1 a week, neither more nor less, which makes those of us who know wonder when the rank-and-file of the clubs will see how completely they are made cat's paws of by their wealthy brother members. Two of the speakers at the meeting happened to be paid secretaries of clubs whose income would be likely to go down if the clubs were pruned of the wealthy members. After mutual congratulations, taking the form of a vote unanimously passed commending the dignified attitude of the clubs, the attention of the meeting was directed to the decision of the magistrates in the recent snowballing case. It was felt that the student who threw the snowballs should have been more severely punished, but the lenient magistrates were held to have been terrorised by the Cork medical men!

The Norwegian barque *Mauranger* is quarantined in Valentia Harbour. Shortly after leaving Mexico the master died from yellow fever, and before the voyage commenced one of the crew died from the same affection.

The following gentlemen have been admitted Fellows of the Royal College of Surgeons in Ireland—viz., Richard B. McCausland, George R. P. Burton, and Henry Stoker.

Feb. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The late Dr. Dujardin-Beaumetz.

GEORGE SAINFORT DUJARDIN-BEAUMETZ, whose death I chronicled in my last letter, was born in 1833 at Barcelona of French parents, and commenced his medical studies in Paris in 1853. *Interne* in 1857, M.D. Paris in 1862, then successively *chef de clinique* and (in 1870) *médecin du Bureau Central*, he took his place at the front on the declaration of war, and his bravery and devotion procured him a mention in despatches and the Cross of Chevalier of the Legion of Honour. It is stated that when in the thick of the fight at Montretout he was seen to be coolly engaged in picking up the wounded. Someone reminded him of the danger he incurred. He replied, alluding to his myopia, "Les balles! mais je ne les vois pas." Appointed physician to the Hôpital Saint Antoine in 1876 he there delivered before large audiences his Leçons de Clinique Thérapeutiques, read since by thousands of students and practitioners. In 1882 he left Saint Antoine Hospital for Cochin (in the Rue Saint Jacques), of which hospital he remained physician until his death. There he continued his clinical teachings, set up two laboratories (therapeutics and bacteriology) which became great centres of activity, numerous pupils such as Dubief, the bacteriologist &c., being "turned out" by this Dujardin-Beaumetz school. His wide-world renown as an authority in the field of therapeutics rendered his wards a familiar rendezvous for students of this faculty and visitors, and a run up to Dujardin-Beaumetz's wards became almost as much an institution as a visit to the Salpêtrière in Charcot's time. Elected Member of the Academy of Medicine in 1880, he became a frequent speaker at the meetings of that learned assembly. As a member of the Conseil d'Hygiène his enthusiasm in sanitary reform and preventive medicine soon brought him to the front. When cholera made its unwelcome appearance in 1884 and 1892 he was the most valued counsellor of the Prefecture of Police, and the city of Paris owes him a debt of gratitude for the energy and success with which he stemmed the tide of the epidemic on those occasions. In 1892 he instituted two most precious departments—viz., the Comité Permanent and the Service des Épidémies, both of which have proved a blessing to this vast population. In 1893 the Government showed its appreciation of his worth by bestowing on him the Cross of Commander of the Legion of Honour. He was a prolific writer, his chief works being, in chronological order, "Leçons de Clinique Thérapeutique," "Dictionnaire de Thérapeutique," "L'Hygiène Prophylactique," "Hygiène Alimentaire," "Les Plantes Médicinales," "Les Nouvelles Médications," "Le Formulaire" (in collaboration with M. Yvon), and "Traité des Maladies de l'Estomac." Recently he started the publication of a library of medicine and surgical therapeutics and contributed the first volume, "L'Art de Formuler." He was besides the editor-in-chief of the *Bulletin de Thérapeutique*, and contributed countless valuable reports to the Conseil d'Hygiène on various sanitary questions as they cropped up. He was also the founder and Honorary President of the Société de Médecine et de Chirurgie

Pratiques. Some idea of his intellectual activity may be gathered from the fact that on the day of his death (Feb. 15th) a paper dictated by him appeared in his journal, the *Bulletin de Thérapeutique*. It was always a matter of regret and surprise that the efforts he made to enter the conservative precincts of the Faculty as Professor remained fruitless. Instead, however, of retiring in disgust he manfully set about instituting a series of independent lectures, with the result that his works became more widely read than those of any professor of therapeutics at the exclusive faculty of which he would have been one of the chief ornaments. He was adored by his pupils, and his cheery presence in his wards was ever welcomed by his poor patients. His health had for the last few years been far from satisfactory, but in September, 1893, he reappeared apparently quite restored after having undergone an operation (laparotomy) at the hands of Professor Terrier. During the respite of seventeen months he continued to work, and when at last constrained to leave Paris he repaired to the south; his habitual cheeriness of disposition never left him, and he died the same bright being he always had been. In the late Dr. Dujardin-Beaumetz we may salute in all sincerity a true searcher after truth, the students' friend, and *un homme de bien*.

Death of M. Alphonse Guérin.

Yet another ornament of the profession has just disappeared in the person of Alphonse Guérin. The life work of this distinguished surgeon deserves more than a passing notice. I, therefore, make no apology for deferring until next week an account of his career, which will be read with interest by all students of surgical progress. Suffice it to say that he was buried with military honours yesterday at the Church of St. Pierre de Chaillot, the pall-bearers being Dr. Empis (President of the Academy of Medicine), Dr. Anger (President of the Société de Chirurgie), Dr. Bergeron (Permanent Secretary of the Academy of Medicine), Dr. Peyron (Director of the Assistance Publique), and Drs. Merklen and Lucas-Championnière. After the ceremony the remains were conveyed, *en route* for Brittany, to the Gare Montparnasse, where several speeches were delivered.

Sterilisation of Water.

M. Frémont[1] has succeeded in proving experimentally that water maintained for twenty minutes at a temperature of 80° C. loses all the pathogenic micro-organisms it may have contained without being deprived of its gases and without involving any precipitation of the contained salts. It is stated that the flavour of the water is in nowise modified by the process—a most important consideration.

Which is, Ophthalmologically, the best Artificial Light?

Dr. Trousseau, surgeon to the Quinze-Vingts Eye Hospital, gives[2] the preference for innocuity to incandescent electric light, and assigns the second place to petroleum lamps, which may advantageously be employed for ordinary purposes. He condemns *in toto* the light yielded by oil, and more particularly that given by candles. The gas-jet is the most hurtful to the eye, its only recommendation being its convenience.

Feb. 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Leyden on Hospitals for Consumption.

AT a meeting of the National-Verein für Hebung der Volksgesundheit (National Health Association), Professor Leyden read a paper on Hospitals for Consumption. The meeting was well attended, and among the distinguished guests were the Chancellor, Prince Hohenlohe, and several gentlemen representing the Cabinet. Professor Leyden first mentioned the fact that in Germany 120,000, and in Berlin not less than 20,000, people suffered from phthisis, and one-seventh of all deaths in Germany is attributed to tuberculosis. The poor sufferers either remained at home, where they do not obtain the necessary care, or are sent to the general hospitals, which are not fitted for this class of patient, and where the phthisical have to be dismissed now and again too early, when their room is wanted for more urgent cases. What is wanted in Berlin, Professor Leyden showed, is special hospitals where poorer sufferers can be treated principally from the hygienic and dietetic point of view, the existing institutions being fitted by their prices only for the more wealthy class. Professor Leyden alluded to England, where the first consumption hospital was opened in 1814, and where now more than 4000 phthisical people can be attended in special institutions. In Germany there exist only very few of these hospitals, one in Malchow, near Berlin, belonging to the municipality of the metropolis, where eighty patients can be received; one in the neighbourhood of Frankfort; and two small houses in Andreasberg in the Hartz Mountains and in Görbersdorf, both of which are maintained by charitable contributions. Professor Leyden hoped, however, that matters would soon be changed for the better. A rich banker had in what he (Professor Leyden) termed the "tuberculin era" made a donation of £50,000 to the city of Berlin for the construction of a hospital where the tuberculin treatment should be adopted. When tuberculin appeared to be a failure, the money was not used according to the will of the donor, and now the town council intends, Professor Leyden understands, to spend this sum upon a hospital where the sufferers will not be treated by Koch's remedy, but by hygienic measures. If only patients in the first stages of the illness were received an average sojourn of three months would suffice. Professor Leyden hoped that not only would the hospital be opened to the indigent, but also to the middle classes, who were unable to pay the high *pension* prices required in the existing private establishments. He closed his address with the remark that a southern climate and the air of the mountains were a great advantage, but not a strict necessity for the phthisical; and that they could be cured if they had good food, a well-ventilated room, and plenty of fresh air. After the discussion a committee was elected to take practical measures to propagate the idea of the construction of hospitals for phthisical patients.

Accidents and Ambulance Organisation in Berlin.

In Berlin the ambulance organisation has been, till recently, very deficient. If, for instance, a person is run over in the street by a carriage the proceedings are as follows. At first a great many people assemble round the victim to give their opinion of the matter. Then several run to the houses of the surgeons in the neighbourhood, who probably are not at home. Finally, a policeman with the assistance of some of the more intelligent of the crowd place the injured man into an ordinary four-wheeler and take him to a hospital. Very often this want of ambulance organisation has led to serious results, numerous examples of which I could narrate. For night accidents, it is true, there are the Sanitäts-Wachen dressing-rooms in several quarters of the town, where from 10 P.M. to 6 A.M. a medical man and an assistant are on duty. These are maintained by the contributions of the inhabitants of the quarter, and their medical officers have to attend casualties in the waiting-room or to go into the houses if their help is wanted. Their necessity has been often disputed by the profession, for in the night medical men are usually at home and can be found without difficulty. Besides, very often people go to the Sanitäts-Wachen who have not met with an accident, but have some other complaint for which they hope to be treated free of charge. As in the night all the manufactories are closed the sufferers from really grave accidents derive no advantage from these waiting-rooms, and the *habitués* are principally rowdies who have been wounded in night rows. Notwithstanding all this, the Sanitäts-Wachen have existed nearly twenty years, and now get an annual subvention from the town council of 40,000 marks. They are rather insufficiently furnished with litters and have no ambulance carriages; but not even the great general hospitals possess ambulance carriages. The only ambulance carriages that exist belong to private undertakers, who also transport sick people and are in emergency cases difficult to obtain. During the past year a great improvement has been made in this matter by a private society. This society has established at different points of the town Unfall-Stationen (accident stations). There are four principal stations and eight branch stations. At the principal stations there are newly constructed horse ambulances which are ready to start immediately in case of alarm; the principal stations are connected with accident wards of thirty or forty beds, where the injured can be attended till they recover. The branch stations consist of a dressing-room with the necessary instruments and dressing materials, and a room with one or

[1] Journal de Médecine de Paris, Feb. 17th.
[2] France Médicale, Feb. 15th.

two beds where the wounded can rest some time. At all the stations surgeons and assistants are on duty day and night. They have telephonic communication, so that in cases of accidents the ambulances and surgeons can easily be called. The new organisation has already been found to be of the greatest practical use.

Feb. 26th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Closing of the Universities.

DR. BACCELLI is to be congratulated on his academic *coup d'état*. No man is a greater friend of the student than his Excellency, but there are limits even to his forbearance, and these have long ago been reached. The undergraduates of Rome, acting in a spirit of solidarity with their brethren of Naples, held a "sympathy meeting" in the quadrangle of the *Sapienza* and denounced his Excellency's measures in language quite unbecoming the scene and its subject. Even this might have been connived at, but when from words the speakers and their audience proceeded to riot the *carabinieri*, in behalf of public order, had to intervene and tried to enter the quadrangle. The students at once assumed the defensive, and by dint of numbers bore back the invading force and shut the great doors in its face. This success, however, was but short-lived. Eight of the ringleaders, by order of the Senatus Academicus, were next day suspended from their studies, but without appreciable effect in restoring calm. A mass meeting of some 800 students was held in the Colosseum, where the proceedings recalled the violence and tumult of the gladiatorial arena rather than the decorum of academic discussion, and again the carabineers had to interpose. The struggle that ensued was a determined one; three of the most turbulent of the students were arrested and subsequently recaptured by their friends, till the Senatus Academicus, impotent to restore order, appealed to the Minister of Public Instruction, at whose instance the University was closed for the year. Meanwhile the epidemic of insubordination has spread throughout the kingdom, and even such staid and dignified seats of learning as the Istituto di Studi Superiori at Florence have been beset by the mutinous spirit. It is, indeed, a declared war between the *Burschenschaft* of Italy and the academic authorities, and nothing short of disaster would ensue if the former were victorious. Of that, however, there is no danger. Dr. Baccelli, one of the most genial, is also one of the most resolute of men, and the interests of education in general and medical education in particular are too dear to him to tolerate for an instant the postponement of either to undergraduate importunities. When tranquillity has been restored and the young mutineers have quietly resumed their work the commencement of a new era in university life will be felt. Dr. Baccelli's academic policy will have been advanced several stages towards its embodiment in the Statute-book, and a salutary reform will have begun in the academic system of Italy. High time is it that such should become *un fait accompli*. For the thirty millions of Italians there are twenty-one universities. The higher education is so cheap and graduation so easy that the country swarms with unemployed professional men too proud to enter a business, but not too proud to become political agitators, in the press or on the platform. The commercial and industrial life of Italy is thus impoverished for the repletion of a pseudo-professional class, and politics are infected with place-hunters too numerous and too clamorous to make sober, steady legislation possible. Of all this no man is more cognisant than Dr. Baccelli, and he has long been maturing innovations which shall restore the healthier academic life of the Renaissance. His views on this subject, however, have too often been put before the readers of THE LANCET to warrant recapitulation here.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Cholera.

CASES of cholera are on the increase in Constantinople and its suburbs. From 15 to 25 cases are recorded daily, the mortality ranging from 3 to 8. The disease has disappeared from the other parts of the country with one exception, but fresh cases are reported from Adalis, in the province of Koniah. The Board of Health has taken every trouble and care for the protection of the health of the capital and of all the provinces, and the Admiralty is sending gunboats to the lazarettos of Touzla, a small port on the Asiatic coast of Marmora, and Kavak, at the mouth of the Black Sea, to watch over the vessels undergoing quarantine in those two lazarettos. The Servian Board of Health has decreed a quarantine of five days on travellers arriving from Constantinople; and a recent telegram from Sofia says that the Bulgarian authorities, foreseeing that in consequence of the imposition of five days' quarantine at Tchataldja on arrivals from Constantinople travellers will take the sea route, have decreed medical inspection with disinfection of luggage at Varna and Bourgas, and eventually a term of quarantine against travellers coming direct from Constantinople.

Small-pox.

The bulletin published in the *Gazette Médicale d'Orient* registers 277 deaths in Constantinople between Jan. 21st and 28th. Of these, thirty-three were due to small-pox. The disease has already spread all over the city irrespectively of class. The Government has been very energetic in combating the spread of the disease, and has supplied vaccine to a number of public and military schools. Most of the vaccine now used in the country is prepared at the Imperial School of Medicine. Free dispensaries are opened in the poor and crowded districts. The epidemic is unfortunately raging in many provinces at the same time.

The Sultan and Phthisis.

The Sultan has charged his personal physician, Dr. Mavrogény Pasha, to bring before the Imperial Society of Medicine the following question for discussion: "Is pulmonary tuberculosis contagious; if so, to what degree is it contagious?" The society, after expressing its thanks to the Sovereign, entered the question into the order of the day. The discussion will commence within a week.

New Buildings.

The ceremony of laying the foundation-stone of the Imperial School of Medicine at Haïdar Pasha, Constantinople, took place on the 12th ult. on the occasion of the anniversary of the Sultan's birthday. The Hall for Surgical Operations, built in the park of the Military Hospital at Haïdar Pasha, was also inaugurated on the same day.

Feb. 19th.

Obituary.

WILLIAM HENRY DAWSON, M.D. DURH., M.R.C.S. ENG., L.S.A.

DR. WILLIAM HENRY DAWSON, whose sudden death from heart disease was recorded in THE LANCET of Feb. 16th, was the son of Mr. R. H. Dawson, an Exeter merchant, and was born in that city on Nov. 17th, 1837. Dr. Dawson was educated at Christ's Hospital, which he left well up on the list of "Grecians," and subsequently served his apprenticeship with Mr. E. P. Pridham, a well-known surgeon of Exeter and a pupil of Abernethy. At St. Bartholomew's Hospital he attained some distinction among the pupils of his time, gaining, among other prizes, that in anatomy. Immediately on taking his diploma he went to Malvern as assistant to the late Mervin Coates, who at once recognised his ability, and it was with his sanction that after a few years he commenced to practise independently in the town, where he continued for thirty-five years. From the first he met with marked success, and was appointed surgeon to the Malvern Lying-in Hospital, which led to a large development in his midwifery practice. He was one of the prime movers in establishing the Cottage Hospital, and became its first superintendent surgeon, a position he held till within a few years of his death. He was also one of the medical officers to the dispensary, and for the past three years had been medical officer of health to the district, offices which he discharged with great assiduity and distinction. To various charitable institutions he gave valuable assistance. He was one of the first to recognise the importance of the Volunteer movement, and was for a considerable period a member of the local rifle corps. Dr. Dawson had a large private practice, and his skill in surgery had more than local renown. To the poor he was always the

kindest of friends, rendering them professional and other assistance, often when his only reward could be their gratitude. By his removal the town has been deprived of a zealous and most efficient public servant, while a large circle of friends will mourn the loss of one who was regarded by all who knew him as a man just and upright in all his dealings. The very general sorrow felt at his death cannot but be a solace to Mrs. Dawson and her family in their hour of heavy bereavement.

HENRY MONTAGU CHAMPNEYS, F.R.C.S. ENG., L.S.A.

HENRY MONTAGU CHAMPNEYS was a son of the Rev. Charles Champneys, Minor Canon of Windsor, Rector of St. Botolph's in the City. He was born in 1818 at Bow in Middlesex, and studied at Guy's Hospital. He became M.R.C.S. in 1841 and L.S.A. in 1844, and was elected F.R.C.S. in 1858 at the instance of Mr. Cooper and Sir Henry Pitman. He practised first at Slough, where he was surgeon to the police and Great Western Railway Provident Society. There being no hospital at that time between Reading and London, and the railway between Slough and Windsor being in course of construction, severe surgical cases were treated at the Eton Union, to which Mr. Champneys was surgeon. In 1861 he went to Battle in Sussex, and in 1867 moved to Penge, where he remained in practice till the time of his death, after a few hours' illness, on Feb. 11th. The cause of death was angina pectoris and syncope. A few years ago he was elected to the Court of Assistants of the Apothecaries' Company. One of the most interesting episodes of Mr. Champneys' earlier life was the trial of the Quaker, John Tawell, who was eventually hanged for the murder of Sarah Hart by prussic acid poisoning. Mr Champneys was first called to the woman at Slough in January, 1845, and throughout the subsequent trial his medical evidence was of no little importance. The case will be remembered from the fact that the defence put forward the theory that some apple pips found in the stomach were sufficient to account for the presence of the amount of prussic acid found.

JOHN ROSE, M.R.C.S. ENG., L.S.A.

MR. ROSE was one of the oldest—perhaps the oldest—practitioner in Islington. He was in his early days a pupil of the late Mr. Freeman of Spring-gardens, and so came into professional contact with historical persons and historical members of the profession. He commenced practice in the neighbourhood of Liverpool-road, later removing to Canonbury-lane, and finally to Parkhurst-road, where he died. He took the licence of the Society of Apothecaries in 1839 and eight years afterwards the Memoership of the Royal College of Surgeons of England. Mr. Rose was a sound practitioner and an upright and God-fearing man. He was greatly respected by a large number of friends and patients. His health had been failing for some time with renal and other troubles, from which, however, he was partly recovering when the prolonged and intense frost caused congestion of the lungs and quickly extinguished his life. Mr. Rose, who was a bachelor, was in his eighty-second year at the time of his death.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the under-mentioned subjects:—

Surgery.—L. M. Breton, St. Thomas's Hospital; W. J. Gillespie, St. Bartholomew's Hospital; D. W. Jones, Charing-cross Hospital; S. E. Price, London Hospital; H. Roberts, St. Mary's Hospital; W. Suteliffe, Birmingham; M. M. Townsend, King's College Hospital.

Medicine, Forensic Medicine, and Midwifery.—A. F. Blake, London Hospital; W. Mettam, Sheffield; H. H. Thomas, Charing-cross Hospital.

Medicine and Forensic Medicine.—W. E. Bremner, King's College; R. Keatinge, London Hospital.

Medicine and Midwifery.—H. G. C. Hardwick, St. Thomas's Hospital.

Medicine.—H. Roberts, St. Mary's Hospital.

Forensic Medicine and Midwifery.—S. S. Wallis, Guy's Hospital.

Forensic Medicine.—J. C. G. Reed, Guy's Hospital; and G. Lowsley, St. Bartholomew's Hospital.

Midwifery.—A. H. Wade, St. Bartholomew's Hospital.

To Messrs. Jones, Keatinge, Mettam, Price, Roberts, and Suteliffe was granted the diploma of the society.

UNIVERSITY OF EDINBURGH.—The degrees of M.B., C.M. were conferred on the following six gentlemen on Jan. 26th:—

W. G. Alexander, Selkirk; G. H. Drury, Halifax; Malcolm McLarty, Edinburgh; A. J. M. Paget, London; Thomas Roberts, Carnarvon, North Wales; and J. M. Taylor, Edinburgh.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following gentlemen have obtained the Diploma in State Medicine:—

George O. E. Burkitt and Henry Stoker.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following gentlemen, having passed the necessary examination, have been admitted Fellows of the College:—

Richard Bolton McCausland, Dublin; George Rooke Penrose Burton, Westmorland; and Henry Stoker, Dublin.

NEWSVENDORS' BENEVOLENT AND PROVIDENT INSTITUTION.—The Hon. W. F. D. Smith, M.P., will preside at the annual dinner of the above association on Tuesday, April 23rd, at the Grand Hotel. The claims upon the funds of the association exceed considerably the amount of its available income, and an earnest appeal is made for public support.

PRESENTATION.—Dr. Thomas Jackson of Whitehaven, a zealous supporter of the temperance cause in Cumberland, and well known to all adherents of the movement in the North of England both as a medical man and as a citizen, has just been presented by his fellow-townsmen, in recognition of his steadfast and valuable services in the cause, with a complete edition of the Encyclopædia Britannica and bookcase, accompanied by a solid silver tea service and an album containing the names of the subscribers.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session was held on Feb. 13th. Mr. A. W. Prichard and Dr. Edgeworth brought before the society a case of intestinal obstruction from congenital malformation; Dr. Harrison, Mr. Munro Smith, and Dr. Aust Lawrence discussed the case. Dr. J. E. Prichard read a case of unusual development of intestine, and also showed specimens of an anencephalous monster, and horseshoe kidney; Dr. Harrison, Dr. Aust Lawrence, Mr. Ewens, and Dr. J. G. Swayne discussed the cases. Dr. Aust Lawrence read a paper on some cases of inversion of the uterus; Dr. J. G Swayne, Mr. Paul Bush, Dr. W. C. Swayne, Dr. Steele, and Dr. Harrison spoke on the subject. Mr. Ewens described a case of multilocular parovarian cysts of both ovaries, in which he had performed a successful operation; Mr. Morton, Dr. W. C. Swayne, and Dr. J. G. Swayne commented on the case.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 20th, Dr. Tew, President, being in the chair. Dr. Watson read a paper, illustrated by drawings and lantern slide photographs, on the Calcareous Corpuscles of Tapeworms: What are they? He gave the history of the subject and alluded to the views of von Siebold, Goodsir, and others. The bodies were invariably present in tapeworms and echinococci, but could best be studied in the tissues of the cœnurus cerebralis from the sheep. Here they could be seen as round or oval bodies with a capsule and well-defined nucleus, which latter might be divided into two or more parts. After discussing the views of various writers, the speaker expressed the opinion that the bodies might be parasitic protozoa. He referred to the bodies he had seen undergoing fission as evidence of this, and to their apparent independence of the tissues in which they lay. In some respects they resembled coccidia, but at present they could not be classified in any known species. The President and Dr. Ransom having made some remarks, Dr. Cattle showed on the screen some drawings and photographs of rabbit's coccidia and of cancer bodies. With regard to the bodies described by Dr. Watson he remarked that they did not appear to have an intra-cellular stage, as always appeared to be the case with the growing forms of parasitic protozoa, and further that no development appeared to have been observed in them after their removal from the body. Mr. Chicken showed a Pedunculated Tumour removed by means of the écraseur from the upper part of the rectum of a woman of middle age. Dr. Wm. Ransom showed microscopic sections of Hypertrophic Cirrhosis of the Liver and Spindle-celled Sarcoma of the Kidney.

LITERARY INTELLIGENCE.—We are asked to announce that with the first number of the thirteenth volume of the *Bristol Medico-Chirurgical Journal*, which will appear this month, an addition will be made to the editorial staff of the journal. Dr. Bertram Rogers of 11, York place, Clifton, will act as editorial secretary.—The Secretary of State for India has a limited number of copies of the "Nature of Cholera," by the late Dr. Bellew, which he will be glad to distribute amongst such medical institutions and hospitals as may desire to have them. Applications should be addressed to the Under Secretary of State for India, India Office, London, S.W.

ROYAL METEOROLOGICAL SOCIETY.—The usual monthly meeting of this society was held on Feb. 20th at the Institution of Civil Engineers, 25 Great George-street, S.W., Mr. R. Inwards, F.R.A.S., President, being in the chair. Mr. W. Marriott gave an account of the thunderstorm and squall which burst over London so suddenly on the morning of Jan. 23rd. It appears that this storm passed across England in a south-south-easterly direction at the rate of about forty-seven miles an hour, being over Northumberland at 4 A.M., and reaching the English Channel by 11 A.M. Thunder was first heard in the vicinity of Leeds, and accompanied the storm in its progress across the country. One of the most remarkable features of the storm was the sudden increase in the force of the wind, for in London it rose almost at one bound from nearly a calm to a velocity of thirty-six miles an hour. This sudden increase of wind caused considerable damage, and at Bramley, near Guildford, twenty-eight trees were blown down along a track 1860 yards in length.

SANITARY ASSURANCE ASSOCIATION. — The fourteenth annual meeting of the Sanitary Assurance Association was held at the offices of the association, 5, Argyll-place, W., on Monday, Feb. 11th, Mr. Henry Rutherford, barrister-at-law, in the chair. Mr. Joseph Hadley, secretary, read the annual report, which stated that the work of the association continued to be carried on in accordance with the plan initiated by it in 1881. County councils, schools, and other authorities continued to seek the services of the association and to act on the advice given in the reports, plans, and specifications of works furnished by its officers. The council stated that, while recognising to the full the excellent work done by the local authorities in carrying out the Public Health Acts, nevertheless, bearing in mind the deadly nature of sewer air and the suffering still ensuing from unhealthy conditions, they feel that such an organisation as the Sanitary Assurance Association continues to be indispensable. The income for the year had been £404, and after meeting all liabilities a balance was carried forward. On the motion of the chairman, seconded by Dr. K. Macleod and supported by Dr. Willoughby and Mr. Mark H. Judge, the report was unanimously adopted. Mr. Roger Smith, Professor of Architecture at University College, and Mr. Henry Rutherford were re-elected members of the executive committee. Dr K. Macleod was elected president of the association for the year; and Sir Joseph Fayrer, F.R.S., Surgeon-General Cornish, and Mr. Andrew Stirling were elected vice-presidents.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Frozen Meat.

Mr. T. D. SULLIVAN has given notice of the following question for a day next week—viz., to ask the President of the Board of Agriculture whether, previously to the slaughter in Australia and other places of sheep and cattle whose flesh is converted into frozen meat and sent to this country for human food, they are examined by competent inspectors, with a view to ensure that no animals suffering from disease shall be used for that purpose.

The Superannuation of Poor-law Officers.

Mr. Walter Long, who held office under the late Administration as Parliamentary Secretary to the Local Government Board, has introduced into the House of Commons a measure to provide superannuation allowances for Poor-law officers. At present these officers possess an equitable statutory claim to a superannuation allowance after not less than ten years' service upon becoming incapacitated from the performance of their duties by reason of permanent mental or bodily infirmity or of old age. The allowance, however, is dependent upon the discretion of boards of guardians, and while during the last thirty years the majority of boards have recognised the claims of the officers there have been many cases where grants have been refused. Mr. Long's Bill proposes that in return for a percentage contribution from their salary and emoluments every Poor-law officer shall be entitled to a superannuation allowance when he becomes incapable of discharging the duties of his office by reason of permanent infirmity of mind or body or of old age. The Bill also proposes to give power to the boards of guardians to require an officer who has attained the age of sixty-five years to retire when they are of opinion that his retirement is desirable in the interests of the public service.

The Pistols Bill.

We have repeatedly called attention to the unsatisfactory state of the law with regard to the sale and use of pistols and toy firearms, and several attempts to deal with the matter have been made both in the House of Commons and in the Upper Chamber. In 1893 Mr. Asquith brought in a Bill which embraced suggestions frequently advanced in THE LANCET, and last year Lord Stanley of Alderley proposed a measure making the sale of toy pistols illegal. This Bill was so mauled in committee that the noble Lord disclaimed responsibility for the changes. On Wednesday last Lord Carmarthen introduced a Bill into the Commons which is virtually the proposed measure of Lord Stanley as amended. With the object of preventing the sale of toy pistols a clause has been inserted providing that a licence of £1 shall be required from vendors of pistols. The motion for the second reading was carried by 204 against 85 votes.

The Influenza.

Replying to a question by Mr. Aird in the House of Commons on Tuesday last, Mr. Shaw-Lefevre said the inquiries instituted by the Local Government Board in 1890–91 and in 1892–93 dealt with the epidemic of influenza from a statistical and general aspect, and with its clinical and bacteriological features. The results of the inquiry were embodied in two large reports and presented to Parliament. In 1892 a memorandum was issued by the Board suggesting advisable prophylactic measures, and there was no reason to vary those suggestions With regard to the recirculation of the memorandum, not only in the metropolis but also in the districts where the epidemic prevailed, the President of the Local Government Board said he would see what could be done in the matter.

Accidents in Industrial Employments.

It is the intention of the Government to introduce another Bill this session to make provision for public inquiry in regard to fatal accidents occurring in industrial employments in Scotland.

The Walthamstow Inquiry.

On the motion of Mr. George Russell, an address has been presented to Her Majesty for copies of the report of the Commissioner appointed by the Home Secretary to inquire into allegations made regarding the treatment of children in the St. John's Industrial School for Roman Catholic boys at Walthamstow, of the evidence taken, and of the letter addressed to the managers of the school by the Home Secretary at the close of the inquiry.

The Public Health Acts.

Sir Albert Rollit has prepared a Bill to amend the Public Health Acts with respect to sewers.

HOUSE OF COMMONS.

THURSDAY, FEB. 28TH.

A New Mines Bill.

Mr. John Ellis asked the Secretary of State for the Home Department whether, having regard to the proved danger to life of the manner in which shot-firing is now carried on in many coal mines, and the investigation, report, and recommendations of the Royal Commission on Explosions from Coal Dust in Mines, he is prepared to introduce and press forward a Bill dealing with the subject.—Mr. Asquith said he had prepared a Bill dealing with fiery and dusty mines, and with the precautions to be taken in firing shots in mines. The recommendations of the Royal Commission had been attended to in framing the Bill, and he hoped to introduce the measure on an early day.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BAUCHOP, W. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Public Vaccinator for the Lumsden District, New Zealand.

BONARDT, A. O., M.B., Ch.B. Melb., has been appointed a Surgeon to Her Majesty's Fleet, Victoria, Australia.

BYERS, ALFRED, M.B., Ch.B. Vict., B.S. Lond., has been appointed Junior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester.

DENNIS, O. A., L.D.S.R.C.S. Irel., has been reappointed Honorary Dental Surgeon to the Nottingham General Dispensary.

FAVELL, RICHARD, M.R.C.S., has been reappointed Surgeon to the Jessop Hospital for Women, Sheffield.

GERATY, THOS., L.R.C.P. Irel., M.R.C.S. Eng., has been reappointed Honorary Consulting Surgeon to the Nottingham General Dispensary.

GIBLIN, E. O., M.D. Aberd., M.R.C.S. Eng., has been appointed Surgeon-Major to the Tasmanian Rifle Regiment, Tasmania.

GRACE, H., L.R.C.P. Lond., L.R.C.S., L.M., has been reappointed Medical Officer of Health for Kingswood.

GRAHAM, A. W., M.B., L.R.C.P. Lond., M.R.C.S., has been appointed an Additional Public Vaccinator for the District of Riverton, New Zealand.

GRANT, A. A. C., M.B., M.S. Glasg., has been appointed House Surgeon to the Maternity Hospital, Glasgow.

HINNELL, JAS. S., M.D. Camb., M.R.C.S., has been appointed Assistant Medical Officer to the Suffolk General Hospital.

HOGG, R. B., M.R.C.S. Eng., has been appointed Public Vaccinator for the Timaru District, New Zealand.

HOWATSON, C. W., M.B., C.M. Edin., has been appointed Medical Officer for Dunblane Prison, vice Brown, re-signed.

JACOBSON, G. OSCAR, M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Pembridge District of the Kingston Union, vice E. C. Williams, resigned.

KENDALL, H. W. M., M.R.C.S. Eng., has been appointed Honorary Surgeon to the First Westland Rifle Volunteers, New Zealand.

MCBREARTY, JAS., L.F.P.S. Glasg., has been appointed Public Vaccinator for the District of Brunner, New Zealand.

MACDONALD, THOS., M.B., C.M. Edin., has been appointed Parochial Medical Officer for Kiltarlity.

MACDONNELL, JAS. A., M.B., Ch.M. Aberd., has been appointed Public Vaccinator for the Buller District, New Zealand.

MARTIN, J. W., M.D., M.Ch. Irel., has been reappointed Honorary Medical Officer to the Jessop Hospital for Women, Sheffield.

MILES, G. E., L.R.C.P. Lond, M.R.C.S., has been appointed Medical Superintendent to the Hospital for the Insane at Newcastle, New South Wales, and also Health Officer for the Port of Newcastle, vice Ross.

MILLARD, R. J., M.B., Ch.M. Syd., has been appointed Medical Officer to the Hospital for the Insane at Callan Park, New South Wales.

MINCHIN, E. J., L.K.Q.C.P., L.R.C.S. Irel., has been appointed a Public Vaccinator in South Australia.

MORRICE, GEORGE GAVIN, M.A., M.D. Cantab., M.R.C.P., has been appointed Physician to the Salisbury Infirmary.

NIX, H. W., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer of the Pilbarra District and also Public Vaccinator for the Urban and Suburban Districts of Marble Bar, and the Rural District of Pilbarra, Western Australia.

PARKINSON, WALTER GEORGE, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Hospital for Women and Children, Leeds.

PIERCE, WM., M.D., L.R.C.S. Irel., has been appointed Assistant Health Officer at Watson's Bay, New South Wales, vice Sibley, retired.

PROUDFOOT, R., M.B., M.S. Edin., has been appointed Resident Medical Officer at the Prince Alfred Hospital, Sydney, New South Wales.

PRYCE, F. D., M.R.C.S., has been reappointed Honorary Consulting Surgeon to the Nottingham General Dispensary.

ROBIN, V. J. R., L.R.C.P. Lond., has been appointed Surgeon to the Port Douglas Hospital, Queensland, vice Bowser.

ROSS, C., M.D. Syd., M.B., Ch.M. Edin., has been appointed Medical Superintendent of the New Hospital for the Insane at Kenmore, near Goulburn, New South Wales.

TAYLOR, G. H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Superintendent at the Coast Hospital at Little Bay, near Sydney, New South Wales.

TAYLOR, SHEPHARD THOMAS, M.B. Lond., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer of Health to the Chingford Urban District Council.

TEALE, J. W., M.A. Oxon., F.R.C.S., C.M., has been appointed Honorary Consulting Surgeon to the Royal North Sea Bathing Infirmary, Scarborough, vice Cooke.

THOMSON, JOHN B., M.B., C.M. Edin., has been appointed Public Vaccinator for the District of Arrow, New Zealand.

TRUMAN, E. B., M.D. St. And., M.R.C.S., has been reappointed Honorary Consulting Surgeon to the Nottingham General Dispensary.

WEBSTER, F. R., M.R.C.S., has been appointed Honorary Consulting Surgeon to the St. Albans Hospital and Dispensary.

WELLS, T. P. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Honorary Medical Officer to the St. Albans Hospital and Dispensary.

WHITE, G. B., M.R.C.S., has been reappointed Honorary Consulting Surgeon to the Nottingham General Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician, for six months. Board and residence and allowance for washing provided. Applications to the Secretary, office, 24, Finsbury-circus, E.C.

FISHERTON ASYLUM, Salisbury.—Assistant Medical Officer, single. Salary £100 per annum, with board, lodging, and washing.

ISLE OF AXHOLME RURAL DISTRICT COUNCIL.—Medical Officer of Health for the District. Salary £35 per annum. Applications to the Clerk to the Council, Epworth, Doncaster.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer, unmarried, at the North-Western Hospital for Fever Patients, Haverstock-hill, N.W. Salary £160 per annum during the first year, £180 during the second year, £200 during the third and subsequent years of service, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Norfolk-street, Strand, London, W.C.

MIDDLESEX HOSPITAL, W.—Vacancy on the Honorary Staff and Election Committee.

NORTHUMBERLAND COUNTY LUNATIC ASYLUM, Morpeth.—Assistant Medical Officer, unmarried. Salary £120 per annum, increasing £10 yearly to £150, with furnished apartments, board, and lodging.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board and residence.

ROYAL INFIRMARY, HULL.—Senior House Surgeon, unmarried. Salary £100 per annum, with board and furnished apartments.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon, for six months. Salary £80 per annum, with board, lodging, and washing.

SUNDERLAND BOROUGH ASYLUM, Ryhope, Sunderland.—Assistant Medical Officer for three years and may be renewed. First year £100, second year £125, third year £150, with quarters, board, washing, and attendance.

SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer, unmarried. Salary not exceeding £50 per annum, with board, residence, and washing.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Medical Registrar and Pathologist, for one year. An honorarium of 50 guineas voted at the end of that term.

THE HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

VICTORIA HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Edinburgh.—Resident Physician, for six months. Apartments, board, and washing, with allowance of £2 monthly for conveyance in connexion with out-door department. Applications to the Hon. Secs., 1, North Charlotte-street, Edinburgh.

Births, Marriages, and Deaths.

BIRTHS.

HENDLEY.—On Feb. 23rd, at Dharmsala, Punjab, India, the wife of Surgeon-Captain Harold Hendley, I.M.S., D.P.H., Civil Surgeon, of a daughter. (By telegram.)

JESSOP.—On Feb. 24th, at Fitzjohn's-avenue, N.W., the wife of Edward Jessop, M.R.C.S., L.R.C.P., of a daughter.

STEVENS.—On Feb. 27th, at Springfield, Tulse hill, S.W., the wife of A. B. Stevens, M.B. Oxon., of a daughter.

WILLIAMSON.—On Feb. 22nd, at Eldon-square, Newcastle-on-Tyne, the wife of G. E. Williamson, M.A., F.R.C.S., of twin sons; one was stillborn.

WRIGHT.—On Feb. 22nd, at Leinster-square, W., the wife of Dudley D'A. Wright, Esq., M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

ATTERBURY—HILL.—On Jan. 2nd, 1895, at Napier Cathedral, Hawke's Bay, New Zealand, Walter Atterbury, M.D., of Akaroa, Canterbury, to Ethel Jane Forster, third daughter of Thomas Hill, late Collector of Customs, Auckland.

FORSYTH—ACKERMANN.—On Feb. 26th, 1895, at the Parish Church, St. Austell, Cornwall, by the Vicar, the Rev. Canon Hammond, LL.B., Charles Forsyth, M.B., and B.S., of Middleton, Manchester, to Beatrice Maud, youngest daughter of the late George Ackermann, London, and of Mrs. Ackermann, Brisbane House, St. Austell.

GROSE—BALSDON.—On Feb. 26th, at Wear Gifford, John Sobey Grose, M.R.C.S. Eng., L.R.C.P. Lond., of Bideford, to Mabel E. Balsdon, of Wear Gifford.

HANNAN—CLAYTON.—On Feb. 23rd, at St. John's, Southwick-crescent, W., by the Rev. C. F. Clayton, M.A., assisted by the Rev. W. C. Heaton, M.A., Vicar of Holy Trinity, Gough-square, and the Rev. A. P. Clayton, M.A., Vicar of Holy Trinity, Ventnor, I.W., Francis J. Hannan, M.D., 89, Camden-road, Regent's-park, N.W., to Ada, youngest daughter of the late S. W. Clayton, Esq., and of Mrs. Clayton, Eastfield, Ryde, I.W.

HILLIER—SHUTTLEWORTH.—On Feb. 26th, at Dallington Church, by the Rev. P. Ward, Curate of St. Mary's, East Moulsey, assisted by the Rev. T. C. Beasley, M.A., Vicar, Sidney Hillier, M.D. Edin., of Stowmarket, Suffolk, to Mary Ethel, youngest daughter of Joseph Shuttleworth, of Elmleigh, Dallington, Northamptonshire.

DEATHS.

BULTEEL.—On Feb. 21st, at Looseleigh, Devon, James Courtney Bulteel, M.D. Edin., in his 86th year.

CLARENDON-SMITH.—On Feb. 23rd, at Royal-crescent, W., Henry Clarendon-Smith, M.R.C.S., aged 86 years.

CLARKE.—On Feb. 23rd, suddenly, while on a visit at Leura, Toorak, Melbourne, Surgeon-General Jno. Jas. Clarke, of Vernon-terrace, Brighton. (By cable.)

CREIGHTON.—On Feb. 21st, at Derryree House, Lisnasken, Ireland, Robert Creighton, M.R.C.S., J.P., Deputy-Inspector-General, R.N., retired, aged 68 years.

DOUGHTY.—On Feb. 24th, at his residence, Philbeach-gardens, S.W., Edward Davidson Doughty, M.R.C.S., aged 83 years.

GEORGE.—On Feb. 24th, at Eastfield House, Horncastle, Lincolnshire, Hugh George, M.D., aged 67.

GILLETT.—On Dec. 23rd, at his residence, Brooke, Norfolk, George Gillett, M.R.C.S., L.S.A., aged 76.

GOOD.—On Feb. 22nd, at 13, Rothesay-place, Edinburgh, Fannie Russell, dearly beloved wife of J. Ernest Good, M.B., C.M.

HIGGINBOTTOM.—On Feb. 24th, at Shakspeare-street, Nottingham, Marshall Hall Higginbottom, Surgeon, aged 72.

JONES.—On Feb. 14th, at King-street, Regent-street, John Jones, M.R.C.S., aged 58.

LYALL.—On Feb. 25th, at Priory-parade, Cheltenham, David Lyall, M.D., F.L.S., Deputy-Inspector-General of Hospitals and Fleets, aged 77.

MACNAMARA.—On Feb. 26th, at Cambridge-street, Hyde-park, John MacNamara, K.S.S., M.D., aged 75 years.

MAUNSELL.—On Feb. 21st, at his residence, Cromwell-road, South Kensington, Henry Widenham Maunsell, M.A., M.D., aged 48.

PHIPPS.—On Feb 24th, at his residence, Oxford-street, Manchester, George Constantine Phipps, M.D., F.R.C.S.E., in his 61st year.

SUTTON.—On Feb. 25th, at The Hollies, Holmes-Chapel, Cheshire, from pneumonia, Charles Frederick Sutton, L.R.C.P., M.R.C.S., aged 26 years, only son of Charles Frederick Sutton, Surgeon. No cards.

TOWNE.—On Feb. 23rd, at his residence, Clissold-road, Stoke Newington, N., Alexander Towne, M.R.C.S. Eng., L.S.A., in his 82nd year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. E. Lloyd-Williams: Some Experiments with Plastic Filling Materials. Casual Communications:—Mr. Harry Rose: On Taking Impressions of the Mouth.—Mr. J. F. Colyer: Some cases of Open Bite.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Bertram Hunt: On the Pathology of Diphtheria.—Dr. John A. Hayward: Cultivation of Diphtheria Bacilli in Antitoxin Serum and in Hydrocele Fluid.—Dr. C. P. White: Growth of Diphtheria Bacilli in Hydrocele Fluid. Specimens illustrating the Bacteriology of Diphtheria will be shown.

WEDNESDAY.—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Inaugural Address by Dr. Champneys. Dr. J. Inglis Parsons: The Disintegration of Organic Tissue by High Tension Discharges.—Dr. Leonard Remfry: List of Ovariotomies in Women over Eighty; a Case aged Eighty-three complicated by Epithelioma of the Vulva.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Handford: A case of Cerebral Tumour following Injury.—Dr. Karl Grube: Cases illustrating the Association of Psoriasis with Diabetes.—Mr. Arbuthnot Lane: Rupture of the Gall-bladder and Liver produced by Violent Straining in a Patient suffering from Obstructive Jaundice.—Mr. Walter Spencer: Traumatic Cystic Lympho-sarcoma of the Shoulder removed after Five Years' Growth by Amputation of the Right Upper Extremity, the Flap being taken entirely from the Upper Half of the Arm.—Dr. Wallis Ord: A case of Complete Unilateral Arrest of Development with Arcus Senilis and without Hemiplegia in a Girl aged twelve years.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Corneal Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Aural Polypi.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Alcoholic Insanity.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (VIII).

ROYAL BRITISH NURSES' ASSOCIATION.—8 P.M. Dr. W. S. Colman: Bedsores, Bladder Troubles.

SOCIETY OF ARTS.—8 P.M. Sir Charles M. Kennedy: Colonies and Treaties.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Lichen Planus and Scrofulosus.

WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Mr. Dunn: Eye Cases. (Post-graduate Course.)

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Glaucoma.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Treatment of Eczema.

SOCIETY OF ARTS.—8 P.M. Mr. C. W. Radcliffe Cooke: Cider.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. S. R. Gardiner: Three Periods of Seventeenth Century History—I. The Stuart Monarchy.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. Arthur Voelcker: Infant Feeding.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Gowers: Clinical Lecture.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. C. Theodore Williams: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Actinomycosis and Glanders.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. F. Bowreman Jessett: Cancer of the Breast.

ROYAL INSTITUTION.—9 P.M. Prof. A. W. Rücker: The Physical Work of von Helmholtz.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Climacteric and Senile Insanity.

ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Waves and Vibrations (II.).

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Erythema.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 28th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Feb. 22	30·31	N.E.	38	36	64	43	36	...	Overcast
,, 23	30·30	W.	39	37	59	47	37	...	Cloudy
,, 24	30·04	W.	39	37	63	47	37	...	Cloudy
,, 25	29·88	N.E.	36	35	43	38	35	0·06	Cloudy
,, 26	29·94	N.E.	33	30	66	43	30	...	Overcast
,, 27	29·75	N.E.	36	33	74	43	33	...	Cloudy
,, 28	30·02	W.	35	35	65	43	35	...	Cloudy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

MUST THE RETIRED MEDICAL MAN SERVE UPON A JURY?

To the Editors of THE LANCET.

SIRS,—I have just retired from general medical practice, and do only consultations occasionally. Am I still exempt from being called to serve upon a jury or to hold the office of overseer? Your opinion will oblige,

Yours faithfully,

Feb. 25th, 1895. MEDICO.

*** Our correspondent still enjoys, we believe, the right of exemption. The 35th Section of the Medical Act exempts every person who is registered under the Act, who shall so desire, from serving on juries and inquests, and all corporate, parochial, hundred, and township offices, and from serving in the militia.—ED. L.

J. R. Lofthouse.—We never recommend individual practitioners; our correspondent's regular medical attendant is the person to give him the advice he seeks.

Inquirer.—Our correspondent would do well to decline to give such a certificate.

THE MEDICO-BOTANICO SOCIETY.

To the Editors of THE LANCET.

SIRS,—Can any of your readers let me know where to refer for information about the Medico-Botanico Society of 1830, run by a certain Mr. John Frost, whose doings are alluded to in the Memoir of the Rev. R. H. Barham at the beginning of the third volume of the 1847 edition of the "Ingoldsby Legends" (chap. vi.)?

I am, Sirs, yours truly,

Feb. 21st, 1895. QUESTOR.

A CENTURY'S "BUTCHER'S BILL" IN WAR.

A HIGHLY interesting study of what a hundred years of war have cost France in human life has just been made public by Dr. Lagneau, Member of the Academy of Medicine of Paris. When the Revolution broke out France's effective army was only 120,000 men. For the wars waged during ten years in Belgium, on the Sambre, the Meuse, the Rhine, the Alps, the Pyrenees, in the Vendée, and in Egypt there were called out 2,800,000. At the census made in the ninth year of the Republic there remained of these only 677,598. In killed and in dead by disease the wars of the First Republic cost France 2,122,402 men. From 1801 to Waterloo 3,157,398 men scarcely sufficed to fill the blanks which in an incessant war against combined Europe France incurred at Austerlitz, Jena, Auerstadt, Friedland, Saragozza, Tengen, Eckmühl, Sacile, Essling, Wagram, Taragona, Smolensk, Schwardine, Moscow, Lützen, Bautzen, Dresden, Leipsic, and Waterloo. Under the Restoration, Louis Philippe, and the Second Republic, in spite of the war in Spain (1823), the conquest of Algiers (1830), and the taking of Antwerp, France passed through a period of comparative calm. The army numbered about 213,748, and the mortality averaged 22 per 1000. In 1853-5 recommenced the epoch of the great wars — the Crimea, Italy (1859-60), China (1860-1), Mexico (1862-6), and the disasters of 1870. In the Crimea, out of 300,268 men 95,615 succumbed; in Italy, out of 500,000 there died 18,673; in China 950 and in Cochin China 48 per 1000. The Second Empire cost France the lives of about 1,600,000 soldiers. According to Dr. Lagneau's demographic tables, the century from 1795 to 1895 witnessed the death in battle or by disease of 6,000,000 French soldiers.

Sirius.—It cannot be well that young men should attempt to obtain such information from books. Moreover, the treatises written in non-scientific language are without exception misleading and generally gross and mischievous. The usual questions which arise on this topic can be answered, and constantly are answered, by the family medical man, to whom we advise our correspondent to apply.

L.R.C.S. Edin. writes: Will you please allow me to ask through your columns what books it is best to read on the subjects required for the Fellowship of the Royal College of Surgeons of Edinburgh?

Mr. J. J. Brown.—We do not see that our correspondent's communication is particularly medical in character.

"SULPHUR *v.* ANTITOXIN IN THE TREATMENT OF DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—Since your correspondent, Mr. Hawkins Cuthbert, has mentioned my name in his letter, which you print in your current number, will you permit me to offer a few words of comment on his contribution. No one who has had any experience of diphtheria can doubt that the remedies in which both Dr. Brownlow Martin and Mr. Hawkins Cuthbert are so much interested have any other than a good effect as local germicides. But the former is not to be blamed because he gives iron and chlorate of potash in combination with the sulphite of magnesium internally and insufflation of the same remedy locally; nor need there be any imputation on the efficacy of antitoxin because Dr. Hamilton simultaneously used sulphur locally in a case of his own. Mr. Hawkins Cuthbert says: "As long as the profession will persist in treating cases at one and the same time with two or more remedies, it is impossible to say how far each individual remedy is responsible for the result obtained." I venture to think this is comparatively unimportant so long as a patient's life is saved, for with a disease such as diphtheria, of local origin but with rapid systemic infection, it appears imperative on us to combine the best local with the best general measures in its treatment. I trust the day is far distant when in this or in any other disease a remedy will be applied to the human subject as if he were a rabbit or a guinea-pig, with the main object of obtaining mathematical results. The wonderful success achieved by antitoxin treatment at the North-Western Hospital, where that remedy—used as an auxiliary and not as a substitute for other measures—has given a mortality of under 5 per cent. (THE LANCET, Feb. 2nd, p. 305), is an object lesson of which all should take heed.

I am, Sirs, yours faithfully,

Mansfield-street, W., Feb. 23rd, 1895. LENNOX BROWNE.

Lieutenant-Colonel.—The committee will do well to settle this question in friendly conference with A and B. They only can say when a case is sufficiently beyond the line of common practice and experience to require the opinion of a specialist. The limits of specialism are always varying.

Enquiry.—The advertisement of the lecture is not in good taste. Some licence is allowed to those who give lessons to intending missionaries, but it may easily be abused. It is more difficult to define the offence of covering in regard to midwifery than to the other branches of practice.

A Sufferer will probably find the information he requires in chap. iii., Part II., of Dr. Burney Yeo's work on "Food in Health and Disease," published by Messrs. Cassell and Co.

SOME POINTS IN DEATH CERTIFICATION.

To the Editors of THE LANCET.

SIRS,—I am anxious to have your direction in the following matter. Again and again when I have been called to cases where I found the patient dead on my arrival I have refused a certificate of death, and I have written to the coroner to notify him of the fact. Almost invariably that is the end of the incident. I get no acknowledgment of my communication. I have no idea as to whether the body has been buried or not, and although in many cases the information would be most interesting to me, I never hear what cause, if any, has been assigned for the death. My queries are:—1. Is this the usual practice of coroners? 2. Am I obliged by law to communicate with the coroner or his officer in cases where I refuse a certificate of death? 3. In cases where I am not satisfied with the surrounding circumstances and where the coroner, as usual, declines to hold an inquest, is there a superior authority to whom I can appeal? I may mention that the coroner for my district is not a medical man. I am, Sirs, yours truly,

Feb. 20th, 1895. INQUISITIVE.

*** 1. No.—2. No.—3. If the case is sufficiently grave, it is open for our correspondent to make application to the Lord Chief Justice of England to order an inquest.—ED. L.

G. J. C. asks: Will any brother practitioner give his opinion of the probable result to be obtained by forcible manipulation under an anæsthetic of the limbs of a sufferer from chronic rheumatoid arthritis whose legs have become semiflexed at the knees?

Brixham.—The question is too large a one to be answered in the way our correspondent invites. The general principles of cardiac pathology and the peculiarities of each case must be taken into account.

Perplexed is advised to apply to her medical attendant for directions as to disinfection.

"A QUESTION OF DOOR-PLATES."

To the Editors of THE LANCET.

SIRS,—In reply to a question in reference to the use of unregistrable degrees alone on the door-plates of medical men you hardly cover the point of interest, which is: Is a medical man entitled to place "M.D." on his door-plate when such degree is a foreign and unregistrable one, and under cover of this impose himself on the public as an M.D. presumably of the United Kingdom by omission of any distinguishing affix, and thus offer himself to the public as being on a par with other and registrable degrees of "Doctor of Medicine"? On this, Sirs, we ask for a definite reply as to its legality. On its honesty and honour we do not ask your opinion; but should you decide against the adverse impression many of us have formed as to the legality, I would ask you—Why open your columns to or invite comment from those who are desirous of easily attaching a coveted M.D. to their names by the addition of a new degree-granting body to the metropolis when the distinction (?) can be obtained for a few pounds?

I am, Sirs, yours faithfully,

Feb. 25th, 1895. H.

Æsculapius asks for information respecting any town or village within twenty-five miles of London, near a Great Northern or Midland railway station, having a sandy soil, pine woods, &c., suitable for an elderly patient with bronchitis.

Mr. L. A. Freeth.—To our correspondent's first question we regret we are unable to give any reply. Common lodging-houses and seamen's lodging-houses in the city of London are under the control of the Commissioners of Sewers.

Cliftonville.—We do not answer the kind of query our correspondent puts to us.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Kent Coast Times, Sussex Daily News, Birmingham Gazette, Bradford Daily Argus, Scotsman, North Middlesex Chronicle, Truth, Manchester Courier, Brighton Argus, Leicester Post, Swansea Journal, Rugby Advertiser, North Star, Newcastle Chronicle, Liverpool Courier, Modern Society (London), Kidderminster Sun, Warwick Times, Wishaw Herald, Bristol Times, Glasgow Bailie, Heywood News, Southampton Echo, Cornish Telegraph, Shrewsbury Chronicle, Irish News, Daily Chronicle, Bedfordshire Mercury, City Press, Reading Mercury, Morning, Surrey Advertiser, Keighley News, Leeds Mercury, Citizen, Hertfordshire Mercury, South Middlesex Standard, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Courrier de la Presse, Guy's Hospital Gazette, Alfreton and Belper Journal, Australasian Medical Gazette, Local Government Journal, Northampton Mercury, Referee, Carpenter and Builder, Cincinnati Tribune, Sun, Architect, Cork Constitution, Nursing Record, Builder, Pioneer Mail, Banbury Advertiser, Times of India, Coventry Times, Isle of Ely Advertiser, Rochdale Observer, Weekly Herald and North Middlesex Advertiser Eagle and County Cork Advertiser, Carlisle Journal, Western Daily Mercury, Answers, &c., &c.*

Communications, Letters &c. have been received from—

A.—Surg.-Major S. T. Avetoom, Baluchistan, India; Mr. G. W. Adams, Lond.; Mr. A. Aitkens, Stowmarket; Apothecaries' Hall, Lond., Sec. of; A.S.V.G., Lond.; Asterion, Buckley.

B.—Dr. G. F. Blandford, Lond.; Dr. A. H. Bampton, Ilkley; Dr. J. C. Bowie, Clousta, Shetland; Mr. L. A. Bidwell, Lond.; Mr. W. Brown, Newcastle-on-Tyne; Mr. T. H. Brocklehurst, Weymouth; Mr. H. H. Ballachy, Chelford; Mr. J. J. Brown, Glasgow; Mr. W. H. Brown, Leeds; Mr. H. Butterfield, Northampton; Messrs. Burgoyne, Burbidges and Co., Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Battle and Co., Neuilly-sur-Seine; Messrs. W. H. Bailey and Son, Lond.; Bristol Med. Chir. Soc., Hon. Sec. of; Barth'sche Buchhandlung, Aachen.

C.—Dr. W. S. Colman, Lond.; Dr. J. Cagney, Lond.; Dr. A. T. Cabot, Boston, U.S.A.; Dr. L. J. G. Carré, Lond.; Dr. C. W. Chapman, Lond.; Mr. P. Coleman, Colchester; Mrs. Collins, St. Columb; Mrs. Canning-Pearce, Ramsgate; Messrs. Cassell and Co., Lond.; Messrs. Castle, Lamb and Storr, Lond.; Cecil, Lond.; C., Bristol.

D.—Dr. J. Dickinson, Darenth; Dr. W. M. Dobie, Chester; Mr. F. V. Dutton, Bangor; Mr. J. C. Davies, Emmetsburg, Iowa, U.S.A.; Messrs. S. Deacon and Co., Lond.

E.—English Truss Co., Leeds, Sec. of.

F.—Dr. R. W. Felkin, Edinburgh; Mr. W. E. Franklin, Newcastle-on-Tyne; Mr. E. Frost, Lasswade, N.B.; First Swiss Alpine Milk Exporting Co., Lond., Sec. of; Fulham-road, No. 10; Fisherton House, Salisbury, Sec. of.

G.—Dr. Gowers, Lond.; Dr. C. J. Gibson, Wetherby; Prof. W. S. Greenfield, Edinburgh; Mr. G. B. Griffiths, Bath; Mr. H. R. Greene, Woking; Mr. W. W. Griffiths, Clifton; Messrs. Gust, Phillips, Walters and Williams, Lond.

H.—Dr. J. Hawkes, Northampton; Dr. C. Hoar, Robertsbridge; Surg.-Capt. P. Hehir, Hyderabad; Mr. H. Helbing, Lond.; Mr. W. F. Horton, Lond.; Mr. A. O. Hannywill, Bletchley; Mr. N. W. Holmes, Lond.; Mr. P. G. Hart, Bristol; Mr. C. Hutley, Wakefield; *Hospital, The*, Editor of, Lond; H.

J.—Mr. J. G. Jackson, Lond.; Justitia, Lond.; J. H. F., Liverpool.

K.—Dr. T. N. Kelynack, Manchester; Mr. G. Kelly, Lond.; Mr. H. Kinder, Leicester; Mr. B. Kuhn, Lond.; Messrs. Keith and Co., Edinburgh.

L.—Dr. A. B. W. Livesay, Bournemouth; Dr. F. Levison, Copenhagen; Mr. T. Laffan, Cashel; Mr. T. J. Lipton, Lond.; Mr. F. Lancaster, Blackburn; Mr. G. A. Legge, Somerset East, South Africa; Messrs. Lewis, Hammond and Co., Lond.; Leeds Gen. Infy., Sec. of; Litham Estate Office, Assist. Sec. of.

M.—Dr. J. A. M. Moullin, Lond.; Surg.-Maj. C. M. M. Miller, Lond.; Dr. J. C. Maxwell, Halifax; Mr. F. R. Mills, Lond.; Mr. W. H. Madden, Lond.; Mr. H. Milligan, Wigan; Mr. W. Martindale, Lond.; Mr. J. M. McCarthy, St. George's; Mr. G. B. Mead, Lond.; Mr. W. Milligan, Manchester; Mrs. A. B. Marshall, Lond.; Messrs. J. Maythorn and Son, Biggleswade; Messrs. S. Mackenzie and Co., Dover; Marto, Lond.; M. Lond.; M.O.H., Abram.

N.—Dr. A. Newsholme, Brighton; Mr. G. Newborn, Epworth.

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